

THE EFFECT OF TRANSIENT MOOD ON PERFORMANCE OUTCOMES
AND LEVELS OF MOTIVATION VARIABLES

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The Effect of Transient Mood on Performance Outcomes and
Levels of Motivation Variables

by

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The Effect of Transient Mood on Performance Outcomes
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An Abstract of a Thesis by

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The Problem. This study investigated the effect of transient mood on need for achievement (n Ach), need for approval (n App), need for power (n Pow), and performance outcome measures. It was hypothesized that subjects experiencing negative transient mood states would be associated with lower n Ach, lower n Pow, and higher n App than in a neutral mood state. It was further hypothesized that subjects experiencing a negative mood state would have lower performance levels than subjects in a neutral affective state. Furthermore, it was hypothesized that mood state would be associated with specific life values (as measured by the Life Success Measures Scale). Individuals with high levels of n Ach and n Pow would place more importance upon values related to occupational success dimensions.

Procedure. Measures of n Ach, n App, n Pow, Life Success Measures, depression and performance were obtained from 110 college students. In half of the subjects a negative mood induction procedure was implemented to achieve a transient shift in mood. The remaining subjects were given a neutral mood induction procedure which was not expected to influence their mood state. After the mood induction, subjects were given a series of questionnaires assessing motivation levels and life success values and a task which assessed performance.

Findings. Transient mood state had a significant affect on motivation variables, Life Success Measures, and performance outcomes. As hypothesized, negative transient mood had a significant effect on motivation and performance.

Conclusions. Levels of n Ach and n Pow are significantly effected by an individual's transient mood state. Subjects in the negative mood induction condition had significantly lower levels of n Ach, n Pow, and performance outcomes than those individuals in the neutral mood induction condition. Affective state caused a significant reduction in both motivation and performance.

Recommendations. Organizations using performance measures and levels of motivation variables as factors in evaluations and promotions, should be aware of the effect transient mood states may have on these

measures. Further research is needed to identify what other factors besides affect, effects motivation and performance.

Based on research which illustrates the value of psychological assessment in providing valuable information about potential job performance, many businesses, corporations, and military settings have used assessment results for personnel selection. It seems likely this practice will continue into the 21st century.

Unfortunately, the real-world application of selection procedures for managerial level employment is fraught with legal pitfalls and psychometric complexities. The problems with psychological measurement arise, in large measure, from the fact that, in our post-industrial society, job behavior is complex and multidimensional. Therefore, personnel selection is a fuzzy, conditional, and imprecise task. Determining the best way to select management candidates is a constant problem facing all human resource managers (Allen, Blanton, Johnson-Greene, Murphy-Farmer, & Gross, 1992).

Typical manager and employee selection procedures may consist of some combination of ability tests, personality tests assessing motivation, and job interviews. Among the personality measures, recent studies have underscored the importance of motivation and ability in explaining the early career success of recent graduates. O'Reilly and Chairman (1994) argue that performance is a joint effect of two important individual characteristics: general cognitive ability and motivation. Their data illustrate that the combination of average or above average mental abilities coupled with motivation is significantly

associated with greater career success. O'Reilly and Chairman's findings add to the mounting evidence that studying enduring individual characteristics is critical to predicting managerial behavior and employee success.

My proposed study will examine the effects of transient mood on motivation (need for achievement, need for power, and need for approval) and performance. It will also examine the relationship between motivation characteristics and managerial characteristics/values associated with executive success. Lastly, this study begins to address a void in industrial/organizational psychology literature; the effects of mood on personality measurements and the measurement of performance outcomes.

The positive relationship between motivation and performance has been well established by psychological research. Motivation has been linked to goal setting characteristics, goal attainment, product improvement, increased production, and self-esteem (Chusmir & Azevedo, 1992; Lowery, 1994; Hackhausen & Spence, 1995). Not only is motivation correlated with performance, it appears to be a critical element in the feelings of personal fulfillment, work success of individuals, managers, and organizations (Chusmir & Azevedo, 1992).

Review of Motivation and Performance

Achievement motivation (n Ach) is the term that has been most frequently used to describe the personal striving of individuals to attain

goals within their social environment. As a psychological concept, it has much wider implications for the behavior of the individual than is at first apparent (Cassidy & Lynn, 1989). William James (1890; as cited in Lowery, 1994) provided the initial impetus for the conception of an important relationship between an individual's personal strivings and psychological well-being.

Since William James' initial work, a great deal of research has been conducted on n Ach. Substantial contributions were made by Murray in the 1930's, and his work was followed by McClelland & Atkinson in the 1950's, and continued in the recent work of Hekhausen & Spence (1995). There are well over 3,000 published articles investigating individual personality characteristics and motivational levels, illustrating the importance of the work begun by William James.

The need for achievement (n Ach) was conceptualized by Murray (1938) as an enduring characteristic of personality, a striving for success in any situation in which performance can be evaluated according to some standard of excellence. As pointed out by Atkinson (1957; Atkinson & Feather, 1966), n Ach is a combination of motivational strength and situational variables. This distinction provides the conceptual connection between the relatively enduring characteristics of a personality system and the more variable contingencies arising from social systems as the joint determiners of motives and behavior (Krus & Rysberg, 1976). Therefore, the concept of n Ach is one which is plausible

and attractive to many researchers and practitioners in the areas of managerial motivation (Finemen, 1975). Writers such as McClelland (1961) and Atkinson (1957) have postulated n Ach as an important ingredient of managerial success. In addition, it may also be a relevant factor in occupational training. Individual n Ach levels are reflected in the amount and duration of job training necessary and the quality of output (Finemen, 1975). Thus, it has been found that individuals with high levels of n Ach require less training and instruction, and attain high quality outputs.

One of the most prominent theories of general motivation, is McClelland's need for achievement (n Ach) theory. A central component of this theory is the hypothesis "that a society with a generally high level of n Ach will produce more energetic entrepreneurs who, in turn, produce more economic development" (1951, p.176). In several cross-national tests, McClelland found that nations with high levels of n Ach in workers experienced rapid economic growth (McClelland, 1951). Social scientists who study economic growth are more and more convinced that motivation and personality characteristics of people in general, and those engaged in entrepreneurial activities in particular, are influential in economic development (Singh, 1989). Much of this evidence has very aptly been summarized by Atkinson (1964), Heckhausen (1967), McClelland and Winter (1969), and McClelland (1988). These studies provide impressive evidence to show that n Achievement (urge to

improve and work in competition with others) is one of the most important motivation variables associated with economic development and company success (McClelland, 1988).

A second component of McClelland's theory of the achievement motive has been focused on work organizations (McClelland, 1961). McClelland extensively studied achievement motives at a much smaller level than economic development of nations, defining an achievement motivation in work organizations as a desire to perform in terms of a standard of excellence or as a desire to be successful in competitive situations. McClelland's research has shown that under certain conditions, achievement motivation can be an important predictor of good work performance. Thus, when achievement motivation is high, good job performance becomes very attractive to people; as a result, their performance level outputs are higher (Ikpaahindi, 1987). This is reflected in greater organizational outputs and successes.

A third component of McClelland's theory explains achievement motives at a micro level. This individual level analysis shows the achievement motive is an important factor for individual success (McClelland, 1961). McClelland's (1961) work is consistent with Murray's (1938) definition of the achievement motive as "the desire or tendency to do things as rapidly and/or as well as possible...To excel one's self. To rival and surpass others. To increase self-regard by the successful exercise of talent" (Murray, 1938, p. 64). An alternative

conceptualization to McClelland's concept of individual n Ach is that of n Ach as a level of intrinsic motivation (Riipinen, 1995). This view of motivation theory states that high n Ach persons tend to be competitive, strive to improve on previous attempts, and strive to perform better than others. Research is supportive of the notion that the striving is for feelings of personal growth (intrinsic motivation), not external rewards (extrinsic motivation) (Ikpaahindi, 1987). Thus, we can see, the n Ach motive is equally important for individual success, organizational success, and economic development at the national level (Frey, 1984).

Need for Achievement Characteristics in Managers

Research across all levels of managers (lower managers, middle manager, and upper managers) have found consistent personality characteristics in managers regardless of management position. Managers high in n Ach have a preference for moderate risks and use feedback and expert advice to modify their behavior. A second characteristic found in managers with high n Ach is the constant struggle to excel at each project, meet deadlines, and produce the perfect outcome on each project or goal. These characteristics are important to success in the business world. This view is supported by the work of McClelland (1988) and Singh (1989) who found that high n Ach managers achieve sales goals more rapidly than low n Ach managers. Studies by Heckhause (1967), McClelland (1988), and Singh (1989) identified levels of achievement motivation as a predictor of sales goals

and speed of goal completion schedules. All three studies found that managers with high levels of need for achievement consistently completed sales goals prior to individuals with low need for achievement levels.

High *n Ach* appears to lead managers toward expansion and growth goals rather than toward influencing others or obtaining large profits. For example, high *n Ach* scores among managers in Finland significantly predicted increases in gross value of production, increases in number of employees, and increases in the gross amount of investment used to expand the firm. In both Mexico (Andrew, 1967) and the USA (Wainer & Rubin, 1969), similar results linked *n Ach* with various indicators of company growth. In both studies (Andrew, 1967; Wainer & Rubin, 1969) high *n Ach* managers, however, characteristically were not so concerned with the end goal (profit) as they were with the means to accomplish the end goal. Thus, in comparison with low *n Ach* managers high *n Ach* managers are more concerned with their urge to improve and work in competition with others.

However, success appears to have a price. When working with others, managers' concentration on success often results in a lack of interpersonal sensitivity. For that reason managers with high *n Ach* are often deficient in interpersonal communication skills and empathy. A study by Riipinen (1995) investigated personality characteristics (and factors) most important to managers with high levels of *n Ach*. Results

illustrated that to high n Ach managers, empathy was the least important personality characteristic.

Need For Achievement and Need for Power

In reviewing the motivational theory literature spanning over two decades, McClelland and his colleagues (McClelland, 1961, 1966, 1975, 1976, 1985; McClelland, Atkinson, Clark and Lowell, 1953) extensively documented the importance of Ach motivation and a second form of motivation labeled need for Power (n Pow). Therefore, numerous positive relationships between n Achievement and n Power support the assertion made by McClelland and Burnham (1976) that both are important requisites (predictors) of managerial success.

In recent years there has been a resurgence of research and theory development on the need for power/dominance and its relationship to effective management and occupational suitability (Chusmir, 1985; McClelland 1975, 1976; Stahl, 1986). The need for power (n Pow) or dominance (n Dom-the terms will be used interchangeably here) is, in its narrowest sense, the motive to influence thoughts and activities of a number of other people (McClelland, 1985; Stahl, 1986). More broadly conceived, the need for power also includes a desire to control the environment generally, a tendency to persistence and social initiative, and a desire for autonomy (Medcof, 1990).

Persons high in n Pow like to work, respect institutional authority, and are concerned with disciplined self-respect. Individuals who score

high on need for power assessment instruments enjoy the role of leader and may assume it spontaneously, tend to express opinions forcefully, attempt to control their environment, and seek to influence and direct others (Konovsky, Dalton, & Todor, 1986). This individual difference may be important in furthering our understanding of organizational behavior as it appear to predict leadership behavior and power acquisition in complex organizations.

Several widely cited and well researched books on managerial behavior and performance, contain writings on n Ach and n Pow motives (Allen, Blanton, Johnson-Greene, Murphy-Farmer, & Gross, 1992). In chapters concerning achievement and power for managers, Campell, Dunnette, Lawler and Weick (1970) noted the frequency of behavior aimed at influencing others (n Pow) and the frequency of behavior concerned with setting and accomplishing goals (n Ach). Managerial motivation has been described as: "Better managers tend to show a lifetime pattern of high achievement, power, and economic motivation" (Campbell et al., 1970, p. 361). This view seems to be gaining acceptance as evidenced by Steers' comment in an organizational behavior textbook: "Hence, based on these findings, it would appear that the most successful managers may be those who combine a power-orientation with an achievement-orientation" (Steers, 1981, p. 76).

One of the more recent and extensive treatments of the relationships of n Ach to n Pow is a chapter in a book of readings in

honor of McClelland (Veroff, 1982). "Achievement motivation directs people to meeting socialized standards of excellent performance and thus to highly efficient task-centered strivings, whereas power motivation directs people to doing whatever draws most attention to their own effect on the world. The two motives seem to be fused in instances where the standard of excellence is to win in a social competitive activity or to solve a problem that will be given a great deal of recognition" (Veroff, 1982, p. 100).

Since problem solving by managers frequently is recognized by superiors, subordinates, and peers, and since managers frequently compete with other organizational units for resources or priorities, it appears that management provides multiple instances for the two motives to be fused (Christian, 1971; as cited in Veroff, 1982). Due to Veroff's comment on the fusing of the two motives, and Campbell et al.'s job analysis of the managerial role, the combination of n Ach and n Pow is labeled as managerial motivation. Although both motivational variables contributed to managerial success, each has been found to contribute to different aspects of success.

Several studies have shown correlations between managerial ability and the need for power (for review see House, 1988; McClelland, 1985; Stahl, 1983). In a series of longitudinal studies of economic growth of nations (McClelland, 1961) and in a study of Mexican managers (Andrews, 1967), n Pow was not associated with growth or expansion.

Instead, in addition to striving for effect and influence, managers high on n Pow appear to be concerned with maintenance of the system rather than expansion. While high n Ach managers look toward new and alternative means to achieve their goals, n Pow managers generally stay with available means and fight for a greater share of existing limited resources (McClelland & Winter, 1969). As with high n Ach managers, high n Pow managers are generally low in a motivational factor, need for approval. N App is the need for others approval or group affiliation. Both studies (McClelland, 1961; Andrew, 1967) noted that approval and affiliation with others were absent or found in low levels among highly successful managers.

The Need for Approval Motivation

While need for achievement has received the largest share of attention in terms of work-related research, recent investigations indicate that need for power, need for autonomy, and need for approval may also be important in determining work attitudes and behavior (Steers & Braunstein, 1976). Murray's theory, as developed by McClelland (McClelland, Atkinson, Clark, & Lowell, 1953) and Atkinson (1957), posits that motivated behavior is in large measure a function of the strength of various needs (n Achievement, n Affiliation, n Dominance/Power,) at a given point in time. Although these various needs are important parts of the motivation model, the one I will focus upon now is need for approval.

The need for approval has generally been measured by responses on the Marlow-Crowne Social Desirability Scale (Marlowe & Crowne, 1960). While the trait is usually defined as the need to seek approval, reviews of the research conclude that need for approval contains a very important ego-defensive component. Individuals high in n App depend on favorable evaluations by others and tend to use defensive behaviors in order to protect their weak self-esteem (Isen, Johnson, Mertz, & Robinson, 1985).

Need for Affiliation and Need for Approval are similar terms often used interchangeably. Both concepts are built upon the notion of group belongingness and group consent. They are described as needs to establish, maintain, or restore positive friendship or love relationships with other people in an occupational environment (Chusmir, 1985).

Need for Affiliation has also been defined as “the desire to be with other people even if they are strangers: the desire to share common opinions with others” (Isen & Daubman, 1984). Individuals with high n Aff/n App tend to worry about disappointing or upsetting others, leading them to avoid making decisive or unkind comments or criticism (McClelland, 1985; Winter, 1982). Individuals high in n Aff/n App have a tendency to be influenced by the opinions of others. This can be seen as a source of vulnerability. They may also become defensive and overly sensitive under risk-taking situations. Research has consistently shown high n Aff results in lack of individual managerial success (McClelland &

Burrham, 1976; McClelland, 1985), and corporate performance (Wainer & Rubin, 1969; McClelland, 1985).

Testing Motivational Theories and Managerial Characteristics

Four empirical studies have specifically tested McClelland's motivation theories in managerial samples (Stahl, 1983). Cummin (1967) tested a mixed sample of middle and top level managers, and found that the more successful managers scored higher in n Ach and higher in n Pow than the less successful managers. Wainer and Rubin (1969) found that high levels of n Ach and n Pow were significantly related to company performance for research and development entrepreneurs. Vargag (1975) reported that the simultaneous presence of both n Ach and n Pow were significantly correlated with research and development effectiveness for scientists, engineers, and executives. Lastly, McClelland and Boyatzis (1982) found that a combination of high n Pow and low n Aff characterized long-term success for upper level managers, but a combination of high n Pow and high n Ach characterized effectiveness for lower level managers.

Studies on leadership motive patterns and long-term success in management support McClelland's argument that a particular motive pattern, described as the empire-building or leadership motive pattern, enabled people to be effective managers at the higher levels in an organization (McClelland & Boyatzis, 1982). The pattern was defined as being at least moderately high in need for power, lower in need for

affiliation, and high in need for achievement. High need for Power is important because it means the person is interested in the “influence game,” in having impact on others; lower n Aff is important because it enables the manager to make difficult decisions without worrying unduly about being disliked; and high n Ach enables the manager to work hard toward personal achievement.

Empirical research has verified the persuasiveness, influence, and control that dominant (powerful) individuals tend to possess. A study by Benson and Hornsby (1988) investigated performance evaluations regarding individuals with high levels of need for dominance/power. Performance ratings are often seen as crucial predictors to occupational success or feelings of career success (Brown, 1984). Their results illustrated that employers rated these individuals as effective in persuading others within the context of the organizational setting. Therefore, connections have been found between personality characteristics (i.e. motivation variables) and high performance ratings in the organizational environment.

Factors Leading to Managerial Success

The question of what factors lead some managers to be more successful in their careers than others, has been only partially answered through prior research (Stahl, 1983). Examination of relevant literature reveals that understanding of managerial career success can be enhanced in several ways. Wolf (1973) concluded that most studies have not

adequately considered the role of motivation in predicting earnings, and Brown (1984) argued that motivational variables are likely to be influential in predicting career success (Kolb, Rubin, & McIntyre, 1979).

Why do some people succeed while others with similar abilities do not? Why is it that some managers are promoted more quickly and go further in the organization than others? What should we be doing to enable people who have leadership potential to gain the necessary skill and ability? In the minds of top managers today, there is no doubt that there are certain cookbook methodologies to develop successful managers (Claypool & Cangemi, 1983). However, the traditional textbook concept of a manager as a planner, leader, organizer and controller has been strongly criticized in recent years due to a study by Margerison (1995).

Margerison's (1995) research centered on the view of 204 chief executives managing British organizations. The chief executives were asked what had been the major influences in helping them become promoted as managers. The results clearly indicated the importance of their own personal experience and the need to achieve (Margerison, 1995). It was certainly felt by the chief executives that they had high levels of need for achievement, and they had it in an abundance (Margerison, 1995). The executives frequently referred to wanting to go higher and further at a faster speed than their colleagues. When Margerison (1995) asked the executives why they felt they had been appointed to top management position, they often referred to their need

to achieve and mentioned actual achievements. They were very proud of the targets they had reached and the objectives they had met (Margerison, 1995).

Margerison (1995) found, through interviews and the survey responses, that the chief executives (top level managers) clearly rated a personal need to achieve as a prime factor in their own rise to the top. People with high need for achievement had a very clear sense of their own need to get things done (Haire, Bhiselli, & Porter, 1983; as cited in Maragerison, 1995). It was almost as if the executives had to achieve (Margerison, 1995). A number of executives referred to enjoying work and getting a great sense of satisfaction from making things happen. The managers talked about working in an enthusiastic way. For them, work was a way of life. Without work, the executives felt bored and lacking in purpose. Therefore, they put a high premium upon the personal need to achieve, illustrating that n Ach motivation is an important factor for success as well as their performance outcomes.

These finding are in accord with the cross-cultural results of other work (Johnson & Perlow, 1992) in which managers place great importance on satisfying self-actualizing needs through personal accomplishment. Needs or motives, while not the only reasons for behavior, are major determinants in directing and energizing human action throughout other cultures as well.

A secondary finding of Margerison (1995) was the fact that certain values and needs were stated repeatedly by managers. Although, Margerison's study (1995) was not concerned with personal family values, the author noted the frequency of specific values and needs.

Managerial Needs and Values

Managers generally earn more, have greater responsibility, and possess higher levels of n Pow than the general work population (Chusmir, 1985; McClelland, 1985; Winter, 1982). They might be expected to be more concerned with values related to work and/or to the organizations they help to manage (Ruf & Chusmir, 1995). For example, England (1973) reported that the personal value systems of managers were concentrated on career success rather than social success. The more successful managers favored pragmatic, dynamic achievement-oriented values, whereas the less successful managers preferred more static and passive values (England, 1973).

Managers do not value social contribution as highly as some other values, nor as highly as nonmanagers (Parvathi & Rao, 1982). Social responsibility of business is a relatively common goal of American business executives, but high-level managers did not put these programs ahead of their desire to please stockholders. In fact, social contribution ranked fourth out of five categories of responsibility (England, 1973).

Results of previous research have also shown that, although managers attain much of their sense of self (personal fulfillment) from

activities involving people at work, they are less strongly connected to people at home (Zaleznick, 1977). American managers readily accept having sons leave the family business for a better job and favor married women going to work (McClelland, 1961), all of which suggests that managers may place a lower value on family relationships than on work relationships. Bass and Burger (1979) reported a series of studies of favored values by successful managers that imply an importance attached to professional fulfillment (leadership, expertness, prestige, and duty); other values were less favored and imply a lower level of importance attached to family relationships (affection and pleasure), to social contribution (service), and to security.

Research illustrates that managers value work-related values more and non-work related values less than the general population (Holden & Fekken, 1989). It is expected that, for managerial selection, high scorers in both *n* Pow and *n* Ach would be significantly correlated with the work-related success dimensions of status/wealth, professional fulfillment, personal fulfillment, and security, but not with those dimensions that are non-work related, such as family relationships and social contribution (Parker & Chusmir, 1990).

From a theoretical and intuitive point of view, motivation needs and values should be related, since they both can influence choices or the valence (value) of one outcome over another (Ruf & Chusmir, 1995). Until one recent study by Parker and Chusmir (1990), however, most

previous empirical research was unsuccessful or inconsistent in linking motivation needs and values. In introducing their study of 756 working women and men, Parker and Chusmir contended that the previous lack of correlation between values and motives was because the Thematic Apperception Test had been used. The TAT is an indirect projective test that purports to measure latent or subconscious needs rather than a paper and pencil test that measures manifested conscious needs based on how one values achievement or power. According to McClelland, latent needs are true motives, whereas manifest needs are manifest measures of values. If so, then achievement and power needs, as measured by paper and pencil test such as Steers and Braunstein's (1976) Manifest Needs Questionnaire (latent motives), may be correlated with measures of values, even though needs measured by the TAT may not.

In many studies, the idea of success is limited to work success, particularly to traditional measures of success such as income and promotion. Some studies, however, indicate that people who have achieved high income or status often cite intrinsic or subjective measures other than those related to work when asked to describe their own success (Johnson & Perlow, 1992). In an attempt to measure success in both contexts (motivations and values), Parker and Chusmir (1990) developed an instrument that measures how much value working adults place on various dimensions of life success. The Life Success Measures

Scale was developed as a new way to examine motives and values by looking at the relationship between motivation needs (achievement and power) and six measures of life success values (status/wealth, contribution to society, professional fulfillment, family relationships, personal fulfillment, and security) (Parker & Chusmir, 1990). Although values and motivation needs are different constructs, they both can influence choices or the valence of one outcome over another (Parker & Chusmir, 1990).

A study conducted by Parker and Chusmir (1990) examined important success factors in an individual's life. Contrary to commonly held beliefs, personal fulfillment was rated by workers in their study as their most important success factor in life, following in declining order of importance by family relationships, security, professional fulfillment, social contribution, and lastly, status/wealth. Four of the six sub-classes identified by Parker and Chusmir (1990) appear to be most related to work factors: status/wealth, professional fulfillment, personal fulfillment, and security. This is consistent with their (1990) finding of significant correlations among needs for achievement (n Ach) and power (n Pow) with several values of success. N Ach was linked positively with status/wealth, professional fulfillment, and social contribution but negatively with personal fulfillment and security. N Pow was linked positively with status/wealth and social contribution but negatively with security.

Implications for Managerial Candidates

Over the course of four decades, McClelland, Atkinson and their associates have studied the motivational bases of human behavior (Spangler, 1992). Much of their work has focused on the sources and effects of achievement motivation. This work has included laboratory studies of the effects of need for achievement on performance (Atkinson & Litwin, 1960), studies of performance and success of people such as entrepreneurs in vocation settings (McClelland & Winter, 1969), training efforts aimed to increase the need for achievement of individuals (McClelland, 1965), as well as studies linking the achievement motive to the economic growth and decline of civilizations (McClelland, 1961).

Individuals scoring high on promotional selection and career development assessment instruments frequently display outstanding results after promotion, thus depicting assessment instruments as one form of a predictor for occupational success (Hall, 1994). Although achievement motivation (n Ach) is a term now widely used in psychology and one that has a generally accepted meaning--the striving of individuals to attain goals important to them in their social environment, need for achievement scales provide strong reasons for expecting differences in n Ach to be more strongly associated with managerial success than with success in other jobs (Isen & Gorgoglione, 1983). Lastly, studies conducted by Parker and Chusmir (1990; 1992)

have found that motivation needs and values are highly related constructs for an individual's level of success.

Organizations want to make the right choices in hiring and promoting individuals that have characteristics that are likely to lead to economic development and success in their organization (Fletcher, 1991). Findings illustrate that managerial candidates high in need for achievement and need for power are more likely to attain managerial success. Research illustrates that n Ach and n Pow are important predictors of managerial success, which has prompted me to examine other characteristics and factors that may affect the assessment of n Ach.

Mood State Influences

Since motivation has been found to be a predictor of managerial success (Parker & Chusmir, 1990), it is important to examine any possible factors that may affect levels (measurement) of motivation. An individual's current mood state has been found to have a significant impact upon levels of self-esteem and motivation (Fletcher, 1991). From this work and the implications of the cognitive model, it has been hypothesized that n Ach and n Pow are affected by mood. Moreover, this mood effect may be observed in measurements of n Ach and n Pow, even when the emotional state is of brief duration or transient.

The literature in managerial success and organizational success has not directly examined the changes in measures of motivational characteristics (n Ach, n Pow, n Aff/App) that may occur in candidates'

scores on assessment measures as a result of changes in mood. The best example of this is the effect of small upsetting event (i.e.- a fight with a spouse, death of a pet, or minor accident on the way to work) on a person's performance. More specifically, the question of whether or not dysphoria (minor depression/transient negative mood) has a significant effect on assessment scores is not addressed in the industrial/organizational literature.

If dysphoria or transient changes in mood have an effect on assessment scores, this would constitute error in the assessment of motivation, and would illustrate the need to control for mood when assessing motivational constructs. Depression, minor depression, dysthymia, and dysphoria are all levels or types of depression. These temporary reversible states are often overlooked and may be affecting potential managerial candidates' scores. Therefore, this study will examine the importance of transient mood in relation to performance measures used in predicting managerial success. A brief review of depression and its impact on individuals reveals much that is relevant to the above discussion of motivational constructs.

Depression

Psychosocial studies of depression have consistently indicated a significant association between stressful life events and depression (Hammen, Ellicott, & Gitlin, 1989). Nevertheless, the utility of this finding for individual cases is limited, since insufficient research exists

that specifies which individuals under what circumstances will become clinically depressed (Hammen et al., 1989; Hirschfeld, 1994). The overall statistical association between stressors and depression is typically small, and the majority of individuals who experience even major stressors do not become clinically depressed (Clark & Beck, 1991). A question that arises is, do people under certain stress become mildly/temporarily dysphoric?

Some authorities have estimated that at least 19% of the adult population has had or will have an episode of depression of sufficient clinical severity to warrant treatment (Arraga, Cavaglia, Matos-Pires, Lara, & Paiva, 1995). Those that do not have a severe episode or treated episode of depression, may suffer from dysphoria or minor depression (Arriaga et al., 1995). Even the mildest form of depression has the potential to alter motivation levels, performance, and interpersonal relationships (Teasedale, 1983).

Beck's Cognitive Theory of Depression

One prominent theory of depression formulated by Beck (1967) evolved from systematic clinical observations and experimental testing. Beck's cognitive theory of depression proposes that the essential component of a depressive disorder is a negative cognitive set- that is, the tendency to view the self, the future, and the world in a dysfunctional, negative manner (Beck, Rush, Shaw, & Emery, 1979). This dysfunctional view of self, future, and world, is labeled "the negative

triad". Depressed individuals regard themselves as unworthy, incapable, and undesirable. They expect failure, rejection, and dissatisfaction, and perceive most experiences as confirming these negative expectations (Beck et al., 1979). Depressed individual's dysfunctional thoughts are automatic, repetitive, unintended, and not readily controllable. All depressive disorders, regardless of subtype, are said to manifest the negative cognitive triad, and the major symptoms of a depressive disorder (affective, behavior, somatic, and motivational) are direct consequences of the negative thinking pattern (Beck, Rush, Shaw, & Emery, 1979).

A central component of the theory is that the depressed individual's negative thinking is systematically biased in a negative direction. Idiosyncratic cognitive schemas are proposed as hypothetical structures that maintain the negatively biased view despite contradictory evidence. Schemas are viewed as cognitive structures through which events are processed, varying from person to person with respect to their content, valence, and flexibility. Schemas function like templates, actively screening, coding, categorizing, and evaluating stimuli (Beck et al., 1979). When people face particular circumstances, a schema related to the circumstance is activated. The schema is the basis for molding data into cognitions. The kinds of schemas used determine how an individual will structure different experiences (Beck et al., 1979).

As the idiosyncratic schemas associated with depression become more active, they are evoked by a widening range of stimuli which are less logically related to the schema. In depression, these schema, especially those related to the self-concept and personal expectations, tend to be global, rigid, and negatively toned. Once activated, these depressive schema influence how external stimuli are interpreted, resulting in cognitive distortions. In minorly depressed people the cognitive distortion is minimal, generally allowing the individual to view the negative thought with some objectivity (Philipp, 1993; Holden & Fekken, 1993). As the depression worsens, the thinking becomes increasingly dominated by negative ideas, even though there may be no logical connection between actual situations and negative interpretations (Alford & Gerrity, 1995; Solomon & Haaga, 1994). Consequently, minor depression affects interpretations and idea formation, which may be essential factors determining motivational variables essential for successful functioning (Broadhead, Blazer, George, & Tse, 1990).

These systematic errors in thinking maintain the person's belief in the validity of the negative concepts despite the presence of contradictory evidence (Beck et al., 1979). Depressed people tend to make broad global judgments regarding events that impinge on their lives. The meanings that fill their consciousness are likely to be extreme, pessimistic, absolute, and judgmental, as well as negative and extreme

emotional responses. Among the more common negative/extreme emotional responses are: temper tantrums, crying uncontrollably, pessimistic commentary, and yelling at yourself or others (Alford & Gerrity, 1995).

Beck's Cognitive Diathesis-Stress Model. It is important to recognize that the cognitive theory of depression proposes a "diathesis-stress" model of reactive depression. Specifically, it is hypothesized that a psychological predisposition toward depression proneness is acquired through early experiences that shape the development of cognitive schemas in a negative, self-referential manner. The dysfunctional cognitive schemas will remain latent until activated by stressors to which the individual is sensitized. Several theorists recently have made similar distinction between two types of depression, based on hypothesized underlying personality characteristics (Beck, 1983; Blatt, 1974; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982). For example, Beck (1983) has proposed that vulnerability to depression may be mediated by relatively stable individual differences in two major areas of motivation: affiliation and autonomous achievement. He refers to these two personality dimensions as sociotropy and autonomy, respectively (Robins, 1988).

Research in depression has increasingly focused on the contribution of enduring personality factors in the etiology and maintenance of affective disorders (Clark, Stern, Beck, & Ross, 1995).

Beck's cognitive theory of depression, for example, proposes that the cognitive-personality constructs of sociotropy and autonomy act as vulnerability markers for depression by sensitizing individuals to certain types of negative life experiences (Clark, Brown, & Beck, 1992).

Sociotropy or interpersonal dependency has also been implicated by other researchers as a prominent characteristic of depression-prone individuals (Clark & Beck, 1991).

According to Beck (1983) sociotropy refers to an investment in positive interchanges with other people. Consequently, a highly sociotropic individual seeks to gain the approval and acceptance of others and shows a strong desire to please others in an effort to maintain close interpersonal relations. Autonomy, on the other hand, refers to investment in preserving independence, mobility and freedom of choice (Solomon & Haaga, 1994). Thus, a highly autonomous person strives for independence from others, values work and accomplishments, prefers solitary activities, and maintains a strong individualistic perspective which is often associated with insensitivity to the needs of other people (Clark & Beck, 1991; Clark & Oates, 1995). According to Beck's cognitive model, sociotropic individuals are more likely to experience depression in response to a life event that involves a loss of interpersonal relatedness. Autonomous persons are more likely to become depressed when they experience a life event that threatens their independence and

goal-directed behavior (Clark, Beck, & Brown, 1992; Clark, Steer, Beck, & Ross, 1995).

Beck (1983) does not consider sociotropy and autonomy mixed personality traits but rather cognitive modes that can dominate an individual's psychological functioning at one time or another. In addition, sociotropy and autonomy are thought to be orthogonal factors so that individuals can be high or low on both modes or show a predominance of one personality mode over the other (Clark & Beck, 1991).

Implications for Managerial Assessment

These cognitive modes (sociotropy and autonomy) have the potential to dominate an individual's functioning by altering temporary motivational characteristics. The motivational symptoms often seen in mildly depressed individuals can be explained as consequences of negative cognitions such as: lack of goal commitment, desire to escape from what seems to be insoluble problems, and pessimistic attitudes (Hammen, Ellicott, & Gitlin, 1989). These motivational symptoms and consequences of negative cognitions have the potential to significantly affect the scores on assessment instruments used in managerial promotion and selection.

Research on individual success, organizational success, and economic growth have described various levels of *n Ach*, *n App*, and *n Pow* essential for success. According to Beck's theory, these essential

personality characteristics may be affected by depression levels. Therefore, if we use a continuous model of depression instead of a categorical model, negative affective states at a much lower magnitude than those typically observed in clinical settings, may cause changes in industrial/organizational measures used to predict managerial success.

When information processing affects judgments regarding life events, occupational events must not be overlooked. Characteristics essential for success may be affected by negative and extreme emotional responses, thus affecting performance outcomes.

Affective States

Psychologists have begun to characterize the relation between affect and cognition as fundamentally reciprocal in nature (Alloy & Abramson, 1979; Teasdale, 1983). The interdependence of cognition and emotion is well illustrated in the association between negative self-referent thought and depressive affect. On the one hand, frequency of negative conditions have been linked to increased negative affect (e.g. Beck, 1967), and on the other hand, depressed mood increases the accessibility of negatively toned personal material (Brown, 1984).

A growing body of research suggests that positive affect may have a pervasive effect on cognitive processes (Isen, Johnson, Mertz, & Robinson, 1985). For example, a mild positive affective state of the kind likely to be experienced in everyday life has been shown to influence judgments of various kinds, decision-making strategy, and willingness to take risks

(Isen & Daubman, 1984). Individuals experiencing a mild positive affective state make decisions with more optimism regarding possible results, and are willing to take more risks than when in a neutral or negative affective state (Brown, 1984). These findings suggest that affect may influence not only memory but also cognitive organization and consequences of this organization.

In addition to the positive affect findings, Isen and Daubman (1984) found that negative affect appeared to influence the categorization process in the opposite direction: People in the negative-affect condition tended to restrict decision making and respond at a slower rate to questions than positive affect subjects did (Brown, 1984). Negative affect has often been associated with constricted thinking and reduced cue utilization (Natale, 1977).

Consider attribution theory, how temperate mood and expectancy might combine to influence causal attributions. A person in a positive affective state approaches an achievement task confident of doing well. As a result, successful task performance, being expected, is likely to be attributed to stable causes, whereas failure, being unexpected, is likely to be ascribed to unstable causes. For an individual in a depressed mood, however, success is less certain. Hence, the stability of causal factors may be relatively ambiguous given either success or failure (Brown, 1984).

Brown (1984) found that individuals in an experimentally induced depressed state (Velten procedures were used) rated the causes of success

as less stable than subjects induced to feel elated. In turn, negative affect subjects entertained lower expectancies for success, continued success, and motivation toward success (Bebbington, Katz, McGuffin, Tennant, & Hurry, 1989).

It is interesting to consider Brown's (1984) results with reference to recent findings in the field of depression. Although caution must be exercised when comparisons are made between investigations, the judgments of individuals induced to feel depressed in the study bear a strong resemblance to those of naturally depressed persons (Brown, 1984).

Collectively, then, with respect to a variety of cognitive processes, these investigations highlight the substantial commonalties that exist between the naturally depressed persons and those in an experimentally induced depressed state. Thus, although the use of mood induction as a laboratory analogue of clinical depression has stirred controversy, studies (Brown, 1984; Teasedale, 1983; Spitzer, Endicott, & Robbins, 1978) support the claim that many of the negative cognitions characteristic of depressed persons result from depressed mood.

Purpose of this Study

In recent years, researchers have shown a growing interest in studying the influence of mood on thought and behavior (Isen, & Gorgoglione, 1983; Frost, Graf, & Becker, 1978). However, I was unable to find any research that has looked at the effects of positive, negative, or

neutral mood on assessment instruments used for job selection, promotion, and etc. Therefore, this experiment examined the effects of mood (neutral or negative) on task performance, measures of motivation (n Ach, n Pow/Dom, n Aff/App), and values (LSMS).

I expected subjects who experienced negative mood induction to have lower scores on n Ach and n Pow measures, but to have higher scores on n Aff (Research indicates that negative mood is analogous to minor depression which increases n Aff/App scores and suppresses n Ach and n Pow scores (Isen & Gorgoglione, 1983)). I also hypothesized that subjects in the neutral condition would have higher n Ach and n Pow scores and higher task performance levels than the negative mood group.

A subsequent hypothesis was based on findings by Parker and Chusmir (1990) that revealed individuals with high levels of n Ach and n Pow place more importance upon values related to occupational success dimensions. Therefore, I hypothesized that n Ach would be positively correlated with status/wealth, professional fulfillment, and negatively correlated with personal fulfillment, social contribution, and security. Furthermore, n Pow would be positively correlated with status/wealth and social contribution, while negatively correlated with security.

Method

Subjects

The subjects were 110 Introductory Psychology students enrolled at Drake University who received extra credit points in their Introduction to Psychology course for participation. Subjects consisted of an equal number of males ($n=55$) and females ($n=55$). Subjects were randomly assigned to either the neutral mood group or negative mood group. Subjects with an initial Beck Depression Inventory (BDI) score greater than 17 were excluded from this study due to the possibility of random assignment to the negative mood induction group.

Experimenters

One graduate student (female) and two trained undergraduate psychology majors (1 male and 1 female) were the experimenters for this study. Undergraduate experimenters were given an instructional guide and a minimum of three practice sessions to insure all procedures were followed according to the guidelines. Once criterion for following the guidelines were met, the experimenters observed the graduate student experimenter conducting five sessions and then were allowed to facilitate the experiment without further training.

Design and Procedure

Each participant was greeted by an experimenter and escorted to a private human subjects laboratory room. Subjects read a consent form and any questions that arose were answered. After agreeing to the terms

of the experiment and signing the consent form, they were instructed by the experimenter to perform a practice word formation task to familiarize themselves with the procedure. (The remainder of the tasks were completed after the mood manipulation occurred). After the practice trial of the word formation task, subjects completed two questionnaires, the Beck Depression Inventory and a form (A, B, or C) of the Depression Adjective Checklist. The order of the DACL forms were randomized for each subject (all subjects received all 3 forms of the DACL throughout the experiment). Upon completion of the BDI and DACL, the experimenter collected the questionnaires and instructed the participant to turn on the tape recorder and follow the recorded instructions.

The affect manipulation was conducted by using the neutral and negative mood statements developed by Velten. The Velten Mood Induction Procedure (VMIP) consists of having subjects read a list of statements which may be positive, negative, or neutral. It has been shown that these statements influence subject's mood in a mild, transient manner (Velten, 1968).

In the negative Velten condition, affect was induced by having subjects listen to 50 mood statements and repeat the statements after hearing each statement. The negative statements convey themes of worthlessness, hopelessness, somatic lethargy, and ill health (Isen & Gorgoglione, 1983). Two samples of negative statements are: "Every now

and then I feel so tired and gloomy that I'd rather just sit than do anything." "I have too many bad things in my life." (Velten, 1968).

In the neutral Velten condition, affect is neither positively nor negatively induced. Subjects listened to 60 mood statements and repeated the statements after hearing each statement. The neutral statements consisted of basic facts that do not alter the subject's mood. Two samples neutral statements were: "This book or any part thereof must not be reproduced in any form." "Utah is the Beehive State." (Velten, 1968).

The Velten mood induction procedure has been found to temporarily alter mood. The mood manipulation has been found to last for periods ranging from 10-19 minutes (Isen & Gorgoglione, 1983; Frost & Green, 1982). Instructions for the mood manipulation were given on a pre-recorded audio tape to reduce the potential for experimenter effects.

The tape recorded instructions were the same for the negative and neutral mood groups. (This study does not have a positive mood induction due to similarity of results found in the neutral condition in comparison with the positive statements (Frost & Green, 1982)). Rather than having the statements read, the tape played each statement and subjects repeated the statement out loud to ensure they processed the content of statements. Periodic monitoring of subjects ensured that each subject was repeating the statements out loud. After the subjects listened to and repeated all the statements, the tape instructed subjects

to stop the tape and open the door so the experimenter could give the subject additional instructions.

Upon completion of the Velten procedure, subjects were given a packet of questionnaires. The packet contained an alternate form of the Depression Adjective Check List, the Marlowe-Crowne Social Desirability Scale, the Manifest Needs Questionnaire, and the Life Success Measures Scale.

After completing the second packet of questionnaires, subjects were instructed to listen to the audio taped instructions for the word formation task. Because the practice trial was completed prior to the questionnaires and mood manipulation, the participants began the subsequent three word formation trials without further practice and recorded the responses on a word formation sheet. After the final word formation task, the subjects were instructed to stop the tape recorder and open the door so the experimenter could continue the experiment.

The experimenter collected the word formation score sheets and administered another form of the DACL to track the participant's mood. Upon completion of the DACL, subjects were debriefed and assigned the allotted extra credit points.

Instruments

The Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960) was used to measure need for approval. It contains 33 items which are socially acceptable behaviors, and subjects rate the

items true or false as they apply to the individual. The approval score is the total number of items with which the individual agrees. Crowne and Marlowe (1964) reported an internal consistency coefficient of .88 using the Kuder-Richardson 20 formula, and a test-retest correlation of .88 over a one month period.

The Beck Depression Inventory is a 21-item self-report instrument developed to assess the intensity of depressed mood (Beck, 1967). The BDI was derived from clinical observations about the attitudes and symptoms displayed frequently by depressed psychiatric patients and infrequently by nondepressed psychiatric patients. The clinical observations were consolidated systematically into 21 symptoms and attitudes which could be rated from 0 to 3 in terms of intensity. The items were chosen to assess the intensity of depression and were not selected to reflect a particular theory of depression (Beck, Steer, & Garbin, 1988). The BDI has high internal consistency in psychiatric and non psychiatric samples. The mean internal consistency estimate, coefficient alpha, was 0.87. With respect to test-retest reliability, the BDI's correlations are greater than 0.60 (Beck, Steer, & Garbin, 1988).

The Depression Adjective Checklist is a brief, self-administered measure of transient depressive mood. Each of the 4 forms (A, B, C, & D) are equivalent to each other and have no overlapping items. Each form consists of 32 adjectives, 22 connoting depression and 10 without depressive context. Subjects select those adjectives that best

describe how they feel at the moment. Twenty-two items are keyed positively (scored if checked), and 12 are keyed negatively (scored if not checked). Lubin (1981) reported an internal consistency coefficient of .81 for males and .85 for females for the test items using the Kuder-Richardson 20 formula.

The Life Success Measures Scale is a 42-item questionnaire developed by Parker and Chusmir (1990). The questionnaire contains questions related to six theoretically distinct dimension of life success: status/wealth, social contribution, family relationships, personal fulfillment, professional fulfillment, and security. The latter two dimensions are measured by five items each; the valances are measured by eight items each. The LSMS was developed to measure success according to criteria in addition to income and promotion measures most often used in studies of individual success (Parker & Chusmir, 1991).

Instrument development began with a literature review yielding a list of items practitioners and academics had suggested as appropriate to measure both work and less-work-related success. Items on the initial list were grouped according to evident categories, (e.g., family relationships, status, wealth, etc., and together these were presented to an expert panel of academics and practitioners in various industries, disciplines, and stages of the life cycle). The experts contributed additional items and/or categories to the study, resulting in a list of

items without duplication administered to a wide cross-section of 403 US adults whose ages and work experience ranged from 16-77 and 1-49 years respectively.

Construct validity for the LSMS instrument also is supported by internal consistency with alpha ranging from .67-.87 for the six subscales, as well as factor analysis showing that the six success factors are empirically distinguishable from one another. Temporal stability for the instrument was examined by re-administering the instrument: the coefficient of stability for the scales ranged from a high of .90 for family relationships to a low of .60 for security (Parker & Chusmir, 1991).

The Manifest Needs Questionnaire (MNQ), developed by Steers and Braunstein (1976) is based on the need theory described by Murray (1938). This instrument is used to measure the four needs: achievement, affiliation, autonomy, and power or dominance at work. The MNQ asks respondents to indicate the degree to which 20 statements reflect their work behavior on a 7-point scale ranging from 1= always to 7= never. Based on previous research on Murray's (1938) needs, item pools for each of the needs were generated for purposes of investigation. Initially, items were designed to include measures of the various aspects of each need with particular reference to work settings. And because of this development, the MNQ questionnaire was constructed. Steers and Braunstein report coefficient alphas of .66 for achievement need, .56 for affiliation need, .61 for autonomy need, and .83 for power need.

Word Formation Task

Subjects engaged in five trials (1 practice trial and 4 regular trials) of a word formation task. Subjects were given five numbered envelopes, each containing a letter set. Each letter set was composed of seven letters from which subjects will form words. The letter sets were drawn from a study by Vance and Colella (1990) and a previous pilot study conducted by Mach (1996). Each letter set has been previously pilot tested to ensure a similar difficulty level (Winchester, 1992), and this study ensured a similar level of difficulty by using identical letter sets.

Subjects were required to adhere to four word formation rules. The word must be (1) from the English language (2) two or more letters in length (3) words other than a proper noun and (4) used in one form only per trial. Order of the letter sets were be counterbalanced across subjects. Instructions for the word formation task were given on a prerecorded audio tape to control for potential experimenter effects.

Results

All statistical analyses were calculated using a statistical package (SPSS). Standard descriptive statistics were calculated for all demographic variables overall and by group: college year, age, and number of siblings (see Table 1). Frequency distributions are presented for the categorical variables: college year, race, age, and marital status (see Table 2).

Table 1

Means and Standard Deviations for Demographic Variables

	Overall		Neutral		Depressed	
	Mean	SD	Mean	SD	Mean	SD
College Year *	1.85	1.11	1.91	.26	1.79	.95
Age **	20.72	2.77	22.15	2.25	19.34	1.27
Siblings ***	2.66	1.31	2.52	1.37	2.80	1.24

* College year has an n=109, neutral mean based on an n = 55 and depressed mean based on an n=54.

** Age has an n=108, both neutral and depressed mean based on an n=54.

*** Siblings have an n=110, both neutral and depressed mean based on an n=55.

Table 2

Frequency Distributions for Demographic Variables

College Year	Frequency	Percent
Freshman	51	46.5
Sophomore	36	33.0
Junior	17	15.6
Senior	05	4.1
Missing	01	.8
<u>n</u> = 110		

Race	Frequency	Percent
Caucasian	83	75.7
African American	08	7.0
Other *	18	16.5
Missing	01	.8
<u>n</u> = 110		

* Latino, Asian, or Native American.

Table 2 (continued)

<u>Age</u>	<u>Frequency</u>	<u>Percent</u>
17	01	.8
18	34	32.8
19	31	27.1
20	22	20.2
21	18	16.5
22	01	.8
23	01	.8
<u>Missing</u>	<u>02</u>	<u>1.2</u>

n = 110

<u>Marital Status</u>	<u>Frequency</u>	<u>Percent</u>
Single	109	99.2
Married	0	0
Divorced	0	0
Separated	0	0
<u>Missing</u>	<u>01</u>	<u>.8</u>

n = 110

Means and standard deviations were calculated for the variables of need for achievement (*n* Ach), need for approval (*n* App), need for power (*n* Pow), depression (BDI), Depression Adjective Checklist (DACL - pre induction), and Life Success Measures total and subscales (see Table 3 & 4). ANOVA's revealed no statistically significant group differences prior to the experimental mood manipulation for the BDI and DACLpre induction (*p*-values ranging from *p* < .88 to *p* < .92).

Table 3

Means and Standard Deviations for Motivation and Performance Overall and by Group

	Overall ^a		Range	Neutral ^b		Depressed ^b	
	Mean	SD		Mean	SD	Mean	SD
n Ach	15.75	4.25	6-24	15.20	4.24	16.27	4.24
n App	19.06	3.13	6-25	18.81	2.90	19.30	3.35
n Pow	17.86	4.53	5-25	17.41	4.38	18.30	4.66
BDI	6.91	4.45	0-17	6.87	4.20	6.96	4.50
LSMt _{tot}	24.48	3.45	10-40	23.19	3.78	25.79	3.75
DACLpre	6.97	4.02	0-19	6.94	3.52	7.00	4.44

$n^a = 110$ $n^b = 55$

Table 4

Life Success Measures Sub Scales Means and Standard Deviations

	Overall ^a		Neutral ^b		Depressed ^b	
	Mean	SD	Mean	SD	Mean	SD
Status	3.17	.85	3.41	.96	2.93	.65
Contribution	4.16	.64	4.09	.71	4.23	.56
Family	4.48	.66	4.44	.70	4.52	.63
Pers. Fulfill.	4.60	.45	4.66	.70	4.57	.50
Prof. Fulfill.	4.21	.56	4.27	.56	4.14	.56
Security	3.86	.70	4.00	.50	3.73	.63

$n^a = 110$ $n^b = 55$

Range of responses for subscales = 1-5

Correlations among the variables of *n* Ach, *n* App, *n* Pow, Life Success Measures, depression (BDI), and transient mood (DACLpre) were calculated (see Table 5).

Table 5

Correlations Between Motivation Variables and Affect

	<i>n</i> Ach	<i>n</i> Aff	<i>n</i> Pow	Lsmtot	BDI	DACLpre
<i>n</i> Ach	1.0000					
<i>n</i> Aff	.0253	1.0000				
<i>n</i> Pow	.5773**	.0453	1.0000			
LSMtot	-.3861**	-.0722	-.4404**	1.0000		
BDI	-.2832**	.0346	.1564	-.0915	1.0000	
DACLpre	-.1186	.0630	.1317	-.0465	.3909**	1.0000

**p* < .05

** *p* < .01

As hypothesized, *n* Ach was positively correlated with *n* Pow, and negatively correlated with depression (BDI). *N* Ach and *n* Pow have consistently been highly related in motivation literature spanning two decades. Both motivational variables have characteristic of striving for successes in search of a standard of excellence. As expected, *n* Ach has an inverse relationship with an individual's level of depression, where decreases in achievement motivation are associated with increases in depression levels. However, the hypothesized positive relationship between depression

and need for affiliation was not found. Even though n Ach and n Pow are positively correlated, and depression and n Ach are negatively correlated, a lack of correlation between depression and n Pow was found.

A significant negative correlation between n Ach and LSMtot was found, as well as a negative correlation between n Pow and Lsmtot. Both highly related motivation variables, n Ach and n Pow, have an inverse relationship with the total measure of Life Success values. This inverse relationship illustrates the importance (or lack of importance) placed upon dimensions of life success and levels of motivation an individual possesses.

Lastly, the measures of depression, BDI (depressed mood) and DACLpre (depressed affect) were positively correlated. Thus, both depression instruments are highly related, although they are intended to measure different constructs of depression (depressed mood and depressed affect).

Correlations among n Ach, n Aff, n Pow, Life Success Measures subscales (LsmCon- contribution to society, LsmFam- family relationships, LsmPer- personal fulfillment, LsmPro- professional fulfillment, LsmSec- security, LsmSta- status/wealth) and depression (BDI) were also computed (see Table 6).

Table 6

Correlation's Between Motivation Variables, LSMS Subscales and Affect

	LsmCon	LsmFam	LsmPer	LsmPro	LsmSec	LsmSta
n Ach	-.3734**	-.0938	-.1502	.4811**	-.3071**	-.1197
n Aff	-.2546**	-.1990	.0555	-.0519	.0351	.0867
n Pow	.2456*	-.0278	-.1937**	-.4426**	-.3817**	.3619**
BDI	-.0847	-.0579	-.2159**	-.0946	.0575	.0110

$p < .05^*$ $p < .01^{**}$

The Life Success Measure subscale LsmCon was negatively correlated with n Ach and negatively correlated with n Aff. Those individuals with high levels of n Ach and n Aff rate less highly activities that contributed to society, while individuals rating activities that contribute to society highly had lower levels of achievement and affiliation motivation. LsmCon was positively correlated with n Pow. Thus, individuals with high levels of n Pow rate contribution to society higher than individuals with low levels of n Pow. This is consistent with research illustrating that power motivated individuals often seek power through social contact (Parker & Chusmir, 1992).

The Life Success Measures subscale, personal fulfillment was negatively correlated with n Pow and level of depression. Personal fulfillment has implications for only the individual achievement, whereas n Pow is essential when fulfillment involves the broader

context of social functioning. This is reflected in the observed inverse relationship between the two constructs. The observed negative correlation between personal fulfillment and depression may be interpreted as either depression having an effect upon the amount of value/importance an individual places upon individual fulfillment, or a state effect whereby depression suppresses/distorts an individual's view of relationships.

The Life Success Measures subscale professional fulfillment was positively correlated with need for achievement, but negatively correlated with n Pow. An individual's level of n Ach motivation corresponds with their personal value of professional fulfillment. However, it was found that professional fulfillment has an inverse relationship with n Pow. Again, this is consistent with the individual versus social focus of these constructs.

The Life Success Measures subscale, security was negatively correlated with both n Ach and n Pow. This relationship reveals that the higher an individual's level of n Ach and n Pow motivation, the less the individual's ratings of security. The higher rating (value) placed on security, is reflected by lower levels of achievement and power motivation at the individual level.

Lastly, the Life Success Measure subscale status/wealth has a positive relationship with n Pow. The higher the level of status/wealth an individual possesses, their n Pow motivation

corresponds. Since n Pow is highly thought of to be in relation with wealth, individuals with high levels of power motivation place importance upon the value of status/wealth.

For repeated measures ANOVA's in the study, the Greenhouse-Geisser (Greenhouse & Geisser, 1959) adjustment procedure was used to protect against inflated Type I error due to the violation of the homogeneity of variance assumption. This three step approach was used to adjust the degrees of freedom for the within subjects portion of the analyses (Rogan, Keselman, & Mendoza, 1979). The first step is to reject any effects which do not reach the .05 alpha level. The second step is to reduce the degrees of freedom in the numerator and denominator of the remaining comparisons by a factor (Greenhouse-Geisser) which protects against even the most extreme violations of the homogeneity of variance assumptions. The final step is to calculate the p values using the corrected degrees of freedom. The null hypothesis is then rejected if the corrected values reach the required level of significance.

Repeated measures ANOVA's were used to evaluate the effect of the mood manipulation (neutral condition versus depressive condition) on levels of transient mood. The analysis revealed there was a main effect of group $F(1,108) = 73.89, p < .0001$ (neutral or depressed condition), a main effect of time (pre-induction, post-induction, and post-task) $F(2,108) = 41.30, p < .0001$ and a group by

time interaction $F(2,108) = 39.50$, $p < .0001$ (see Table 7). Although the Greenhouse-Geisser correction was used to adjust the p values, it did not produce a change in the significance of the p values at the reported level of precision.

Table 7

Repeated Measures ANOVA on DACL Scores Across Conditions

Source	DF	SS	MS	F	Sig. F
Group	1	2348.41	2348.41	73.89	.0001
Time	2	884.08	442.04	41.30	.0001
G X T	2	845.63	422.82	39.50	.0001

Greenhouse-Geisser Epsilon = .87793

An examination of Figure 1 shows that the group effect was due to the differences in depression levels between the neutral group and negative group after the mood induction, the time effect was due to change in depression scores for the depressive group after the VMIP, and the interaction was due to the VMIP effect on the negative induction group's depression scores across time. These conclusions are supported by follow-up comparisons.

All follow-up analyses used corrected for inflation of Type I error by using the Bonferroni correction procedure. Follow up tests revealed that there was no significant difference in DACL scores for subjects in the neutral condition or depressive condition prior to

mood manipulation (DACLpre), $F(1,108) = 1.1537$, $p > .285$. There was a significant difference between group's DACL scores at time 2 (immediately following mood induction procedures-DACLmid) between subjects in the neutral condition versus the depressive condition, $F(1, 108) = 95.0017$, $p < .0001$. Subjects in the depressive condition had a post-induction DACL mean = 15.196 (SD = 4.688) and the neutral condition had a post-induction DACL mean = 7.278 (SD= 3.764). There was also a significant difference between group's DACL scores at time 3 (post experimental measure-DACLpost) $F(1, 108) = 76.8388$, $p < .0001$. Subjects in the depressive condition had a DACL mean = 13.804 (SD= 5.065) and the neutral condition had a DACL mean = 6.537 (SD= 3.446) (see Table 8 and see Figure 1).

Table 8

Follow-up Comparisons on DACL Measures Across Conditions

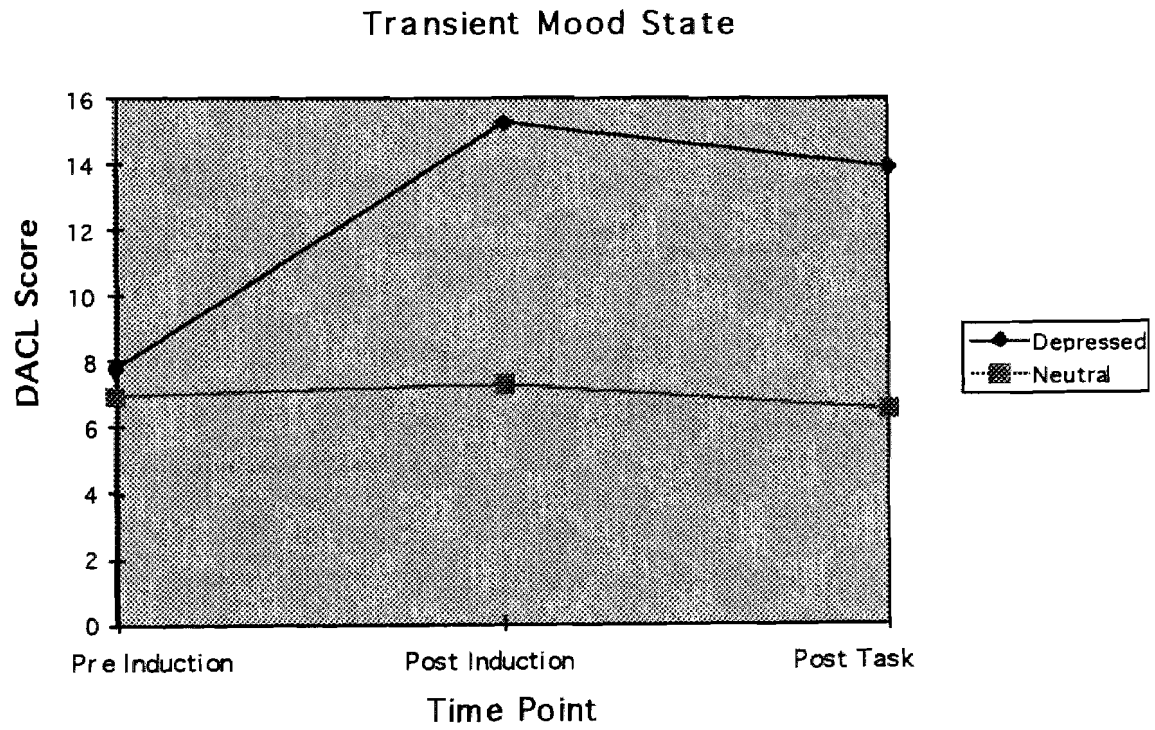
<u>Variable</u>	<u>MS Error</u>	<u>F</u>	<u>Sig. F</u>
DACL pre	16.1557	1.15371	.285
DACL mid	18.1451	95.00177	.000
DACL post	18.8913	76.83886	.000

Follow-up tests revealed no significant change in DACL scores across time (DACL 1-pre, DACL 2-mid, and DACL 3-post) for subjects in the neutral condition, resulting in no significant change of mood

from pre mood induction to post mood induction. However, multiple comparisons revealed a significant change in DACL scores for subjects in the depressed mood induction condition from Time 1 (DACLpre) to Time 2 (DACLmid), $F(1, 108) = 53.578$, $p < .0001$. Subjects in the negative mood induction condition had a significant change in mood from pre induction to post induction scores on DACL measures. Lastly, follow-up comparisons revealed no significant change in DACL score from DACL 2 (DACLmid) to DACL 3 (DACLpost) in the depressed condition, $F(1, 108) = .86972$, $p < .353$. Thus, there was no significant decrease in the effects of the mood manipulation during the task portion of the study for subjects in the depressed condition. These results illustrate that the mood manipulation had a lasting effect across both measures of DACL scores post induction for the depressive condition (DACL 2 and DACL 3). (see Figure 1).

Figure 1

Measure of Transient Mood Across Time



A repeated measures ANOVA was conducted to determine the effect of mood (neutral condition versus depressive condition) on levels of performance (see Table 9).

Table 9

Repeated Measures ANOVA on Performance Across Conditions

Source	DF	SS	MS	F	Sig. F
Group	1	1056.66	1056.66	60.04	.0001
Time	3	16.28	5.43	2.29	.0909
G X T	3	7.05	2.35	.99	.3970

Greenhouse-Geisser Epsilon = .91008

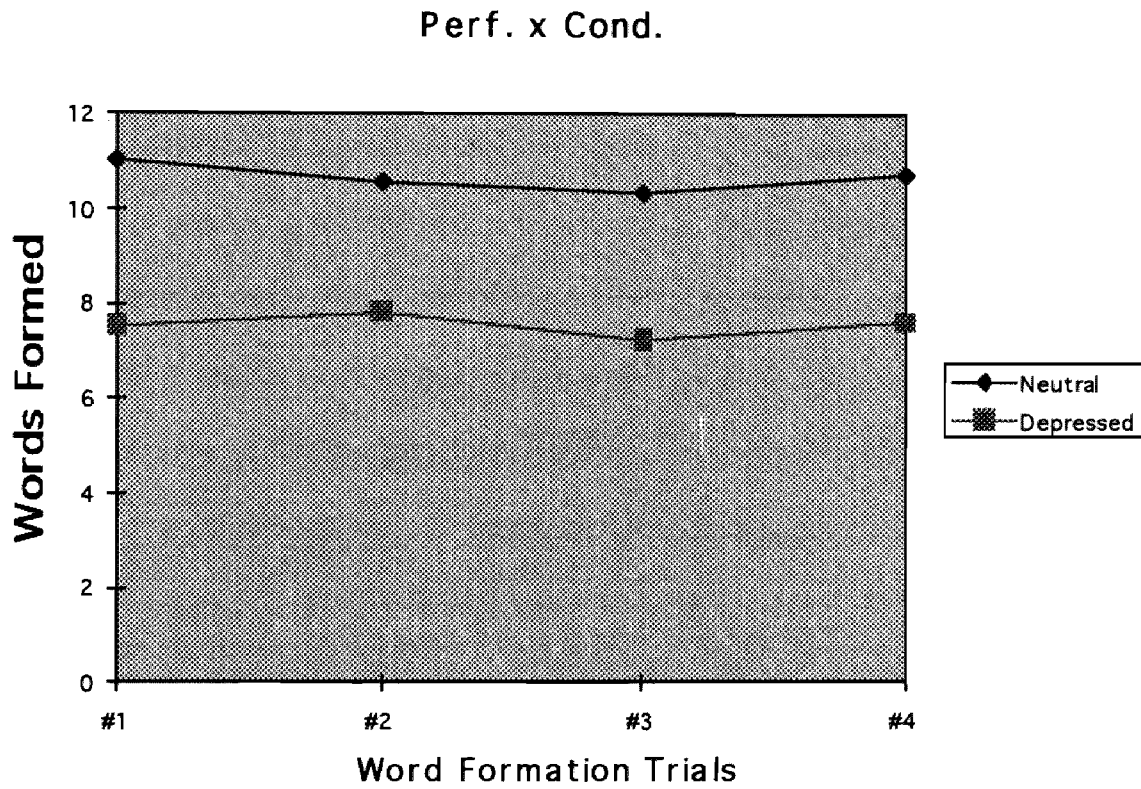
The repeated measures ANOVA revealed a significant main effect of group $F(1,108) = 60.04$, $p < .0001$. As hypothesized, no main effect of time or group by time interaction was found. Follow-up tests revealed significant differences in performance by group at all performance measures (see Table 10 and Figure 2). The neutral condition performance mean was 10.6715, (SD= 2.340) and the negative condition performance mean was 7.5710, (SD= 2.377). These results illustrate that the neutral mood condition had statistically significant higher performance levels across all performance measures (see Table 10 and Figure 2).

Table 10Follow-up Comparisons on Performance Across Condition

<u>Variable</u>	<u>MS Error</u>	<u>F</u>	<u>Sig. F</u>
Wordfrm 1	5.78917	58.00191	.0001
Wordfrm 2	5.58566	37.79541	.0001
Wordfrm 3	5.96759	43.79564	.0001
<u>Wordfrm 4</u>	<u>7.41282</u>	<u>34.77475</u>	<u>.0001</u>

Figure 2

Word Formation Performance Across Trials



A between groups MANOVA was performed on the variables measuring n Ach, n App, n Pow, and Life Success Measures Subscales. Analysis revealed a main effect of motivation levels $F(8, 108) = 907.84, p < .0001$, however, there was no main effect of group or group by motivation level interaction (see Table 11). Follow-up tests revealed a significant difference in the measure of status and wealth (LSM subscale) $F(1, 106) = 10.2234, p < .01$. Subjects in the neutral group had a status and wealth mean score of 3.433 (SD= .955) and the depressive group mean =2.933 (SD= .650). Another significant difference in the motivation variables was the importance of security (LSM subscale) $F(1, 106) = 3.9853, p < .04$. Subjects in the neutral group had a security score mean=3.992 (SD =.761) and the depressive group mean of 3.720 (SD= .628). Despite the LSMsubscale statistical findings, the hypothesized differences in the main motivation variables (n Ach, n Pow, & n App) were not found to be significant (see Table 12).

Table 11

MANOVA on Motivation Variables

Source	DF	SS	MS	F	Sig F
Group	1	5.35	5.35	.82	.367
Motivation	8	40252.80	5031.60	907.84	.000
G X M	8	49.70	6.21	1.12	.346

Table 12Follow-up Analysis of Variance on Motivation Variables

Variable	MS Error	F	Sig. F
n Ach	18.25673	1.47282	.228
n App	9.56380	.32982	.567
n Pow	20.53459	.73050	.395
Lsm-Status	.65844	10.22340	.002
Lsm-Contribution	.40840	1.36360	.246
Lsm-Family	.43866	.42101	.518
Lsm-Personal	.19946	1.02038	.315
Lsm-Professional	.31731	1.27571	.261
Lsm-Secure	.48341	3.98539	.040

Due to the possibility that subjects who were unaffected by the induction introduced significant error variance, analyses were conducted with these subjects removed. However, when partitioning out those subjects that did not induce during the experimental manipulation, statistically significant results were found with motivation variables. When partitioning out subjects in the depressive condition who did not score above the group mean (15.2), statistically significant results were found between groups on measures of motivation. The analysis revealed a main effect of group $F(1,108)=4.32$, $p < .041$, a main effect of motivation $F(8,108)=586.27$, $p < .0001$, and a group by motivation interaction $F(8,108)=3.26$, $p < .001$ (see Table 13).

Table 13MANOVA on Motivation Variables with Subjects Above the Mean
DACLmid

Source	DF	SS	MS	F	Sig F
Group	1	22.49	22.49	4.32	.0400
Motivation	8	24027.94	3003.49	586.27	.0001
G X M	8	133.58	16.70	3.26	.0001

Follow-up tests found statistically significant differences between subjects in the neutral condition in comparison with the depressive condition on levels of n Ach, $F(1, 75) = 5.45786$, $p < .020$. The neutral mood group mean was 17.407 (SD= 4.20) and the depressive mood group mean was 15.407 (SD= 4.27). A second statistically significant result obtained by partitioning out those subjects who did not fully induce was on levels of n Pow, $F(1, 75) = 4.04109$, $p < .0400$. The neutral mood group mean was 19.545 (SD= 3.724) and the depressive mood group mean was 17.507 (SD = 3.770). However, the hypothesized differences between groups on levels of n App was not found (see Table 14).

Table 14Follow-up Comparisons with the Subset of Subjects that Induced in the Depressive Condition

<u>Variable</u>	<u>MS Error</u>	<u>F</u>	<u>Sig. F</u>
n Ach	17.58827	5.45786	.020
n Pow	17.68232	4.04109	.040
n Aff	8.43935	.01419	.905

Discussion

The purpose of this study was to examine the influence of mood on motivation variables and behavior/performance. Although there has been growing interest in the study of mood and behavior, no research in industrial/organizational psychology has specifically examined the effects of transient mood on performance or levels of motivation. Thus, the major findings of this study were twofold in nature. First, it was shown that task performance levels of subjects in the depressive mood condition, were significantly lower than subjects in the neutral mood condition. Second, temporary changes in mood had a significant effect on motivation variables and measures of the importance individual's attached to the attainment of life goals. Overall, this study found that temporary changes in mood significantly affected performance assessment, motivation levels, and reported life success values.

As hypothesized, the subjects in the neutral mood condition had no significant change in mood while subjects in the negative mood induction condition reported significant increase in negative mood, as a result of the Velten Mood Induction Procedure (see Figure 1). These findings are consistent with previous research (Velten, 1968; Isen & Gorgoglione, 1983; Frost & Green, 1982) which indicated that the Velten Mood Induction Procedure neutral induction should not alter affect. Furthermore, previous research has found that the

negative Velten Mood Induction Procedure alters the affective state of individuals, increasing negative/depressive mood (Frost & Green, 1982; Isen & Daubman, 1984; Brown, 1984). These findings are consistent with previous research findings.

As well as finding a significant change in transient mood for the negative mood condition from pre-induction to post-induction, results indicated that there was not a significant change in mood from post-induction to the follow-up mood measure (DACL time 3). It was stated previously that subjects in the negative mood condition would have a significant change in mood from pre-induction to post-induction, but the effect of the mood induction may dissipate by the time the follow-up mood measure was assessed. This was not observed; the mood induction effect lasted throughout the experiment, thereby reducing the possibility that later assessments were biased due to the "wearing off" of the mood manipulation. Previous research (Isen & Gorgoglione, 1983; Frost & Green, 1982) has shown that the Velten Mood Induction procedure has been found to temporarily alter mood for approximately 10-19 minutes. Because the time lag between mood induction and experiment completion was approximately 28 minutes, there was cause for concern that later trials would be affected by the fading of the manipulation effect. However, as shown by the lack of a significant decrease in post induction DACL scores to follow-up DACL scores, this was not the case.

An explanation for no significant change from post-induction DACL scores to follow-up DACL scores could be the way the Velten Mood Manipulation Induction was conducted. Instead of having subjects read the statements themselves, the use of pre-recorded statements were utilized. Subjects had to listen to each statement and repeat each statement verbally. This form of induction may have caused the subject to process the mood statements at a deeper level than reading statements and ensured that each participant was subjected to all statements, thereby increasing the lasting effect of the mood induction.

It was hypothesized that subjects in the neutral mood induction condition would have significantly higher task performance than subjects in the negative mood condition. Statistical analysis revealed that subjects in the neutral condition had higher performance levels on all four performance trials in comparison with the negative mood condition (see Figure 2).

This is in accordance with Isen and Daubman (1984) and Brown's (1984) studies which found that negative affective state restricted subject's decision making processes on a given task. Furthermore, subjects in a negative affective state responded at a slower rate to questionnaires and tasks than subjects experiencing positive affect. Because performance measures consisted of anagram generations in a given time frame, the possible effect negative affect

has on performance may be attributed to lower performance standards for subject in the negative mood induction condition. Possible explanations for this are due to restricted range of creative processes and/or reduced cue utilization.

A subsequent hypothesis stated that subjects in the negative mood group would have significantly lower scores on *n* Ach and *n* Pow, but significantly higher scores on *n* App. While subjects in the negative mood group had slightly lower scores on *n* Ach and *n* Pow, and slightly higher *n* App, the differences between the negative mood group and neutral mood group was not statistically significant.

When looking at factors that may have contributed to a lack of significant differences on motivation variables, the nature of assessment of motivation variables or the lack of successful mood induction may be key factors. Measurement bias may have been introduced through the use of paper and pencil assessment of motivation variables. While this self-report data is subject to individual biases and distortions, the performance data is much less prone to this problem. It is impossible to fake good performance, to create a favorable impression, when assessed by units produced (Brown, 1994). Because performance was measured objectively, we can conclude that the mood manipulation had a significant effect on measurable performance; however, the mood manipulation may not

have been powerful enough to alter motivation or self-report of motivation.

A second possible explanation for the lack of significant differences in motivation variables before partitioning subjects may be the nature of the mood induction itself. It may be that some people do not induce as well as other people. Some subjects may have complied with the instructions and internalized the mood statements while others did not follow directions or internalize the mood statements. Although the Velten Mood Induction procedure had a significant group effect on performance factors, the manipulation may not have been powerful enough to alter subject's responses on self-report measures of motivation. The nature of a performance measure may be more sensitive to transient mood, whereas self-report responses may be less sensitive to transient mood, unless mood is severely changed. The potential difference in sensitivity between performance and self-report data may have contributed to the lack of significant finding in motivation variables across conditions. Therefore, the mood induction may not have been powerful enough to alter subject's self-reported motivation levels.

Although no differences in motivation variables were observed , partial support was found upon closer examination of subjects' induction levels after the mood induction procedure. Closer examination of the negative mood induction transient mood scores at

post-induction (DACL time 2), revealed a mixture of subjects that induced extremely well and others that experienced only a slight shift in mood from pre-induction (DACL time 1) to post-induction (DACL time 2). To evaluate whether the hypothesized effects would be observed in those subjects who induced, analyses were repeated for those subjects who were above the post-induction DACL mean score (15.2). These subjects did show differences in *n* Ach $F(1, 75) = 5.45786, p < .020$. The neutral mood group mean = 17.407 (SD= 4.20) and the depressive mood group mean = 15.407 (SD= 4.27). Significant differences in *n* Pow were also found, $F(1, 75) = 4.04109, p < .040$. The neutral mood group mean = 19.545 (SD= 3.724) and the depressive mood group mean = 17.507 (SD = 3.770). Therefore, these results support the research hypothesis (see Table 15). However, there were still no significant differences in *n* App scores.

A possible explanation for a lack of significant differences between groups on need for approval could be due to the nature of the research population. The subject pool consisted of all undergraduate students ranging from 17-23 years in age. Unlike previous research studies (e.g. Alloy & Abramson, 1979; Blatt et al., 1982; Bebbington, Katz, McGuffin, Tennant, & Hurry, 1989), this subject population had no significant correlation between depression and *n* App before subjects were experimentally induced. It may be that this construct is not affected by the relatively mild fluctuations

in mood that were measured in this study. The construct of need for approval is built upon the notion of group belongingness and group consent, establishing and maintaining friendships or love relationships (Chusmir, 1985). This construct is one that is very important to this age group of individuals.

A study by Freeman (1994) found that high school and college age students (ages 15-22) have dominant motives. The most important motive found across all subjects was the need for affiliation. When dividing subjects as high need for achievers and low need for achievers, there was no statistically significant differences between levels of need for affiliation. This study's conclusions could help explain why there were no significant differences between subjects in the neutral mood condition and negative mood condition. Because this study used only students ranging from 17-23 years in age, high levels of *n* App were apparent for all subjects across conditions.

Two studies prior to Freeman (1994) were conducted by Bhandari (1990) and Prabhavati (1991) with the young working population. Bhandari's (1990) study examined the relationship between executive success and personality characteristics. This study examined 50 middle managers: 25 highly successful managers and 25 managers less successful. Bhandari (1990) measured levels of *n* Ach, *n* Aff, and *n* Pow. The differences between highly successful and less

successful managers were found in the constructs measuring n Pow and n Ach. This study found no statistically significant differences in n Aff between the highly successful and less successful managers. Prabhavati's (1991) study found significant trends illustrating that younger workers (18-25) showed higher levels of n App than older subjects (26-45) even when holding n Ach and n Power constant. Both of these studies conclude that the age group utilized in this study, may have increasingly higher levels of n App in comparison with older age ranges, regardless of motivation variables and transient mood state.

Lastly, the lack of significant differences in motivational variables between the negative and neutral condition may be explained by the nature and composition of the experiment. This experiment was conducted in a laboratory setting which is very different from the occupational setting where differences in motivational variable have been found. Furthermore, the population used for in this experiment was university students. The student population may have significantly different motivation levels when compared with levels of motivation found in managers and managerial trainees. To eliminate these possible confounds it may be essential to conduct this experiment with the working population in the occupational setting.

The fifth and final hypothesis stated that there would be significant correlations among *n Ach* and *n Pow* with several values of success (LSMS subscales). It was hypothesized that *n Ach* would be positively correlated with status/wealth, professional fulfillment, and negatively correlated with personal fulfillment, social contribution and security. Furthermore, *n Pow* would be positively correlated with status/wealth and social contribution, but negatively correlated with security.

The results illustrate that *n Ach* was not significantly correlated with LSMS status/wealth. A possible explanation for this lack of significance is the population sample. The age of the sample is primarily students. It is hard to attach importance to status and wealth when students are not usually earning an income outside of the university nor financially profiting from their student status. Nonetheless, there was a significant relationship between *n Ach* and professional fulfillment. The individuals scoring high on *n Ach* measures are also placing high value on professional fulfillment. Again, this correlation is supported by Parker and Chusmir's (1990) findings among managers and the most commonly held values among individuals with high *n Ach*. Moreover, motivation theory generally attributes the strivings for professional advancement to *n Ach* rather than to *n Pow* (McClelland, 1985). The connection

between the life success dimension of professional advancement to n Ach but not n Pow, therefore, is consistent with the theory.

A second finding consistent with that of Parker and Chusmir (1990) was the significant negative correlation between social contribution and n Ach. Those individuals that are high in levels of achievement motivation often limit the motivation to work dimensions, thus placing less value upon social contribution and personal values. A third hypothesized finding was that n Ach would be negatively correlated with personal fulfillment and security. The relationship between n Ach and personal fulfillment was found in the expected direction, but was not statistically significant. The lack of statistical significance could be attributed to the nature of the differences between a student population and a workforce population. Personal fulfillment is a value most often concentrated upon in middle to late adulthood. Thus they have increasing importance in our society as one begins to age, develop clear career goals, and establish family and friends (Ruf & Chusmir, 1990). Because the population tested had a mean age of 19, this value may not have been one most concentrated upon at this time in the students' lives. However, there was a significant negative correlation between n Ach and security. Those individuals that have high needs to achieve often believe that security and stability accompany the achievements (Parker & Chusmir, 1990).

All of the hypothesized n Pow findings were supported. It was hypothesized that n Pow would be positively correlated with status/wealth and social contribution. These findings are in accord with Parker and Chusmir (1990). Need for power has been defined as the motive to influence thoughts and activities of a number of other people (McClelland, 1985; Stahl, 1986). People illustrating high levels of n Pow value the status that accompanies power. Power often leads to status/wealth or is a result of status/wealth. Thus, high social contribution may be a byproduct of need for status and wealth. A study by Konovsky, Dalton, and Todor (1986) examined the factors underlying the power motive. Subjects high in power motivation expressed the need to direct people, which most often resulted in drawing attention to their own impact on the world, thus resulting in high levels of social contribution or levels of social interaction. A possible explanation for finding n Pow significantly correlated with social contribution, may be found in the commonly accepted definition of n Pow (Winter, 1973): a concern about establishing, maintaining, or restoring power, that is, impact, control, or influence over another person, group of persons, or the world at large. Parker and Chusmir (1990) identify their measures of contribution of society as impacting and influencing others. Thus, contribution to society involves having impact and influence over others, therefore,

correlation with n Pow even though it is thought of as a nonwork-related life success dimension.

Lastly, n Pow was negatively correlated with security. As predicted, this replicates the findings of Parker and Chusmir (1990). Subjects scoring high on levels of need for power did not value security as highly as subjects with lower levels of need for power. A possible explanation is that subjects high in power do not feel insecure. Because their security levels are stable to high, a value of security is not seen as a high life success measure, because it is seen as an accompaniment of power (Parker & Chusmir 1990).

Some implications of the motivation variables and life success measures must be addressed. Although motivation theory contends that needs such as achievement and power cause behavior, it is equally plausible that needs are affected by life success values. It might be worthwhile to devise a study that would be capable of a more precise measure of cause and effect in order to determine the specific direction of these relationships.

Work values may be more important to organizations than personal values, but understanding the differences between the two may aid organizations in lessening traditional barriers between work and home life, and reducing role conflict. Also, understanding work and personal values can promote a greater awareness of and sensitivity to the needs of the management team or employees in

general. Often, despite the presence of similar work related values, employees' personal values/needs can exacerbate conflict at work (Brunson, 1985).

Further implications of these findings are that testing of values for social science research, clinical, or organizational purposes should identify the specific environment rather than an overall, more universal approach. Persons in any role or situation are likely to adopt a set of values or mode of conduct congruent with that role or situation. Questionnaires, therefore, which measure values but do not specify the environment, could be misleading.

Managers and non-managers report strikingly similar work values, but personal value rankings have shown substantial differences. Moreover, it has been found that both groups ranked values quite differently in their work and home lives, suggesting that people may have dual hierarchies of values: one for work life and one for home life (DeVito, Carlson, & Kraus, 1984). Whether people possess more than the 2 value systems (work and personal life) or if there are multiple modes of conduct, different for any situation in which people find themselves, are not identified in this study. Social learning theorists would argue that individuals may possess more than 2 because they tend to occupy many different role in life in addition to the broadly based work and personal roles (Allport, Vernon, & Lindzey, 1960). On the other hand, highly work-

committed individuals may not separate the work and personal roles and therefore may possess only one hierarchy of values. Another unanswered question is that, even though values may be different in managers' work and personal lives, is one set stronger or more important than the other? Future research is needed to answer all these related questions.

A major limitation of this study is the nature of the subject population. All of the subjects tested were university students composed of mostly American values based on American culture. Cross-cultural studies might show sharply different results and might add to our knowledge of values held by men and women in each of the 2 situations. This study used a narrow age population as well as narrow geographic areas, limiting the generalizability of the results. Since values are known to differ across regions, views of what is important in terms of life success may also vary from one region to the other (Ruf & Chusmir, 1990). Cross-checking of these findings with different samples and populations is suggested. Further study is essential, perhaps using a national, age stratified sample.

Conclusions:

The analyses conducted in this study suggest that the Velten Mood Induction Procedures does significantly alter mood states. When changes in transient mood occur (via Velten Mood Induction Procedures) resulting in a mildly depressive mood state, significant

decrements in performance are seen. This finding helps to bridge the gap between clinical psychology and industrial/organizational literature. Industrial/organizational psychology attaches much importance to motivation characteristics, but has not thoroughly examined the effects of affect upon these valued motivation characteristics in the work place. Thus, illustrating that transient mood has a significant effect on performance outcomes may increase attention and research examining some of the same issues clinical psychology is focusing upon.

Lastly, the analyses conducted in this study also suggest that when there is a significant change in transient mood (subjects that induce during the Velten Mood Induction Procedure) this results in significant changes in levels of n Ach and N Pow, the motivation variables most often found essential for good managers or managerial candidates. Transient mood decreases performance, n Ach , and n Pow, possibly reducing the likelihood that an individual will meet all essential characteristics to be hired, raised, or promoted in the future. Therefore, these results illustrate the importance transient mood shifts (minor upsetting everyday life event) can have on performance and motivation levels.

Further research needs to be conducted using managerial and work populations on domain relevant performance outcomes. This further research would clearly link laboratory experimental findings

with settings and tasks relevant to the work population. However, the present study contributes to the literature by being one of the first studies to measure the impact of mild transient mood shifts on motivation, life success values, and performance outcomes. Although the Velten Mood Induction changes are mild compared to regular life event changes in mood such as marital problems, job stress, and death, it is essential to see the effects transient mood has upon individuals. Therefore, these findings are likely to be weak compared to the effects "real" events have on performance and motivation.

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Appendix A
Informed Consent

Drake University Psychology Department

Sub # _____

Consent for participation in research

Anagram Task Performance

The purpose of this study is to investigate how different psychological factors such as need for achievement, need for approval, and depression affect an individual's performance on an anagram task.

If you agree to participate, you will be asked to:

- A. Complete several paper and pencil questionnaires.
- B. Complete sets of anagram tasks
- C. Listen to recorded statements and repeat the statements

You are in no way obligated to participate in this study. You may decline to answer any questions, decline to participate in part of the study, or completely withdraw from the study at any time without penalty.

There are no known risks associated with this study. However, the questionnaires may draw your attention to thoughts and feelings that you do not commonly focus on in your day-to-day life. If you have concerns about the study or experience discomfort for any reason, we ask that you notify the experimenter.

The primary benefit you receive for participation in this study is extra credit for your Psychology 1 course. You may also gain a greater understanding and appreciation for psychological research.

At any time during your participation, you may ask the experimenter questions. If the experimenter cannot address your questions satisfactorily, you may contact Dr. Donald Evans in Olin Hall room #323 (271-3964).

The total time required for participating in this study is approximately 45 minutes. Your participation will be completed in one visit.

(Over)

Consent form (continued)

Sub # _____

By signing this form, you voluntarily agree to participate in this project. Any information obtained from you during the course of your participation will remain confidential and will be used solely for scientific purposes. Your responses to questionnaires and performance on the learning task will be referred to only by subject number and will be secured in a locked file cabinet. You may keep a copy of this consent form if you would like one.

Name (Please print)

ID Number

Name (Signature)

Date

Witness (Signature)

Date

Appendix B

Demographic Questionnaire

Demographic Information Questionnaire

Please answer each question. Your responses will be kept strictly confidential.

Age____ Sex: M F Marital Status____ Year in College____

Race: (Circle one)	African American	Asian
Caucasian (Non- Hispanic)	Hispanic	Middle Eastern
Native American	Other, (Specify)	

Number of children in your family (Including yourself)_____

Marital Status of Parents: (Circle one) Married (Living together)

Married (Living separately) Divorced Widowed

Age of Living Parents: Mother_____ Father_____

Parents' Occupations: Mother_____ Father_____

Parents' Education Level: Mother_____ Father_____

Appendix C

Experimental Manipulation: Negative Velten Mood Induction

Today is neither better nor worse than any other day.
 However, I feel a little low today.
 I feel rather sluggish now.
 Sometimes I wonder whether school is all that worthwhile.
 Every now and then I feel so tired and gloomy that I'd rather just sit than
 do anything.
 I can remember times when everybody but me seemed full of energy.
 Too often I have found myself staring listlessly into the distance, my mind
 a blank, when I definitely should have been studying.
 It has occurred to me more than once that study is basically useless,
 because you forget almost everything you learn anyway.
 People annoy me; I wish I could be by myself.
 I've had important decisions to make in the past, and I've sometimes
 made the wrong ones.
 I do feel somewhat discouraged and drowsy.....Maybe I'll need a nap
 when I get home.
 Perhaps college takes more time, effort, and money than it's worth.
 I'm afraid the war in former Yugoslavia may get a lot worse.
 I just don't seem to be able to get going as fast as I used to.
 There have been days when I felt weak and confused, and everything went
 miserably wrong.
 Just a little bit of effort tires me out.
 I've had daydreams in which my mistakes kept occurring to me.....
 Sometimes I wish I could start over again.
 I'm ashamed that I've caused my parents needless worry.
 I feel terribly tired and indifferent to things today.
 Just to stand up would take a big effort.
 I'm getting tired out. I can feel my body getting exhausted and heavy.
 I'm beginning to feel sleepy. My thoughts are drifting.
 At times I've been so tired and discouraged that I went to sleep rather
 than face important problems.
 My life is so tiresome..... The same old thing day after day depresses me.
 I couldn't remember things well right now if I had to.
 I just can't make up my mind; It's so hard to make simple decisions.

I want to go to sleep..... I feel like just closing my eyes and going to sleep right here.

I'm not very alert; I feel listless and vaguely sad.

I've doubted that I'm a worthwhile person.

I feel worn out..... My health may not be as good as it's supposed to be. It often seems that no matter how hard I try, things still go wrong.

I've noticed that no one seems to really understand or care when I complain or feel unhappy.

I'm uncertain about my future.

I'm discouraged and unhappy about myself.

I've lain awake at night worrying so long that I hated myself.

Things are worse now than when I was younger.

The way I feel now, the future looks boring and hopeless.

My parents never really tried to understand me.

Some very important decisions are almost impossible for me to make.

I feel tired and depressed; I don't feel like working on the things I know I must get done.

I feel horribly guilty about how I've treated my parents at times.

I have the feeling that I just can't reach people.

Things are easier and better for other people than for me. I feel like there's no use in trying again.

Often people make me very upset. I don't like to be around them.

It takes too much effort to convince people of anything. There's no point in trying.

I fail in communicating with people about my problems.

It's so discouraging the way people don't really listen to me.

I've felt so alone before, that I could have cried.

Sometimes I've wished I could die.

My thoughts are so slow and downcast, I don't want to think or talk.

I just don't care about anything. Life just isn't any fun.

Life seems too much for me anyhow..... My efforts are wasted.

I'm so tired.

I don't concentrate or move. I just want to forget about everything.

I have too many bad things in my life.

Everything seems utterly futile and empty.

I feel dizzy and faint. I need to put my head down and not move.

I don't want to do anything.

All of the unhappiness of my past life is taking possession of me.

I want to go to sleep and never wake up.

Appendix D

Experimental Manipulation: Neutral Velten Mood Induction

Oklahoma city is the largest city in the world in area, with 631.166 square miles.

Japan was elected to the United Nations almost fourteen years after Pearl Harbor.

At the end appears a section entitled "Bibliography notes."

We have two kinds of nouns denoting physical things: individual and mass nouns.

This book or any part thereof must not be reproduced in any form.

Agricultural products comprised seventy per cent of the income.

Saturn is sometimes in conjunction, beyond the sun from the earth, and is not visible.

Some streets were still said to be listed under their old names.

The system is supervised by its board of regents.

There is a large rose-growing center near Tyler, Texas.

Many states supply milk for grammar school children.

It is God's will that the fittest survive.

The typography, paper, and bind were of the highest quality.

The machine dominated county posts for as long as anyone could remember.

The desk was old, and scratched into its surface was a profusion of dates, initials, and pleading messages.

The Orient Express travels between Paris and Istanbul.

When the Banyan bent down under its own weight, its branches began to take root.

There isn't a scientific explanation for every U.F.O. sighting.

The Hope diamond was shipped from South Africa to London through the regular mail service.

The review is concerned with the first three volumes.

The ship was ancient, and would soon be retired from the fleet.

Slang is a constantly changing part of the language.

There is a small article in the local newspaper which indicates acceptance of the kidnappers' terms.

There are some forms in which no oath is required.

Intramatics find mates for the lonely.

99.1% of Alaska is owned by the federal government.

Two men dressed as repairmen will appear shortly after the van pulls up.

The wood was discolored as if it had been held in a fire.

A light was noticed in the dark outside, and it moved eerily towards the house.

Painting in a few other non-European countries is treated in a separate volume.

A recent study revealed that one half of all college students were unable to find summer jobs.

Provoked arousal and orientation are accompanied by steeper negative shifts.

The names on the Christmas mailing list are alphabetically ordered.

Significantly, these changes occur during the full moon.

West Samoa gained its independence in 1965.

The magazine's report was slanted, as usual.

The map would prove useless as a beginning guide.

The speaker outlined a plan whereby the current deficits could be eliminated.

Black and white pictures are arranged in ten sections.

The voices come only at night, and whisper words, terrible words.

The papers had been front-paging it for days.

The notice made it clear that coffee breaks were being limited.

No man worked harder than he.

Potter wrote numerous satires on social cynicism.

Boeing's main plant in Seattle employs 35,000 people.

The doorkeeper was dressed in red.

During the next ten years, the group participated in politics.

The organization depended on the people for support.

In 1965, Elizabeth made the first state visit by a British monarch to Germany in 56 years.

It was their sixth consecutive best seller.

It all fitted in with the officer's story.

The merger did not change the company's policy.

The mansion was rented by the delegation.

Ninety occupations were listed as eligible for the grads in business.

Utah is the beehive state.

Changes were made in transport of lumber after the border incident.

The Chinese language has many dialects, including Cantonese, Mandarin, and Wu.

Things were booming once again in the little gold rush town of Angel.

At low tide the hulk of the old ship could be seen.

A free sample will be given to each person who enters the store.

Appendix E

Experimental Task Instructions

Instructions

Welcome to Word Fun. You will need to listen and follow directions closely as this experiment will be facilitated mostly through audio tape. The instructions for this Word Fun task will be given by audio tape, but all instructions are taped on the tape so you can refer to them at a later time. If you need to pause the tape and read the instructions you may do so.

We are now ready to begin the practice word formation trial. Your task will be to form words from given sets of letters. You will have to follow four word formation rules. (1). The word must be from the English language. (2). The word must be two or more letters long. (3). The word can not be a proper noun such as Bob or Betty. (4). The word can be used in one form only. The rules for the word formation task are taped to the table to serve as a reminder. If you need to review the rules, please stop the tape and then press play when you understand the rules. If you understand the rules, continue listening to the tape.

You are now ready to start the Practice Trial. Pick up the envelope located next to the practice trial label taped to the table and remove the letters. You have three minutes to form as many word as you can. Record all of your words you have formed on the word formation sheet marked Practice Trial. You may begin now!!! *(Three minutes expire)*

Stop!

Please place the letter set back in the envelope and place it back by the corresponding trial number. You need to stop the tape recorder and open the door so the experimenter can help you with the rest of the experiment. *(The experimenter hands the subject the designated packet of questionnaires).*

(The subject completes the questionnaires and opens the door. The experimenter tells the subject to start the audio tape again.)

You are now ready to begin the second phase of the experiment. You will hear a series of statements. The tape recorded voice will say a statement and pause so you can repeat the statement outloud. You will hear approximately 60 statements. Please listen carefully and repeat each statement. *(Sixty statements are stated and subjects repeat them.)*

(The subject opens the door and the experimenter hands them the corresponding packet of questionnaires).

You are now ready to start word formation Trial #1. Pick up the envelope located next to the number one taped to the table and remove the letters. You will have three minutes to form as many words as you can. You may begin now!! *(Three minutes expire.)*

STOP!!

Please place the letter set back in the envelope and place it back by the corresponding trial number.

You are now ready to start word formation Trial #2. Pick up the envelope located next to the number two taped to the table and remove the letters. You will have three minutes to form as many words as you can. You may begin now!! (*Three minutes expire*).

STOP!!!

Please place the letter set back in the envelope and place it back by the corresponding trial number.

You are now ready to start word formation Trial #3. Pick up the envelope located next to the number three taped to the table and remove the letters. You will have three minutes to form as many words as you can. You may begin now!! (*Three minutes expire*)

STOP!!

Please place the letter set back in the envelope and place it back by the corresponding trial number.

You are now ready to start word formation Trial #4. Pick up the envelope located next to the number four taped to the table and remove the letters. You will have three minutes to form as many words as you can. You may begin now!! (*Three minutes expire*).

Stop!!!

Please place the letter set back in the envelope and place it back by the corresponding trial number. You may now stop the tape recorder and open the door so the experimenter can assist you with the rest of the experiment.

Appendix F

Manifest Needs Questionnaire

Please place your numeric response to each question in the black space provided.

1	2	3	4	5	6	7
Always	Almost Always	Usually	Sometimes	Seldom	Almost Never	Never

- | | |
|-------|--|
| _____ | 1. I do my best work when my job assignments are fairly difficult. |
| _____ | 2. When I have a choice, I try to work in a group instead of by myself. |
| _____ | 3. In my work assignments, I try to be my own boss. |
| _____ | 4. I seek an active role in the leadership of a group. |
| _____ | 5. I try very hard to improve on my past performance at work. |
| _____ | 6. I pay a good deal of attention to the feelings of others at work. |
| _____ | 7. I go my own way at work, regardless of the opinions of others. |
| _____ | 8. I avoid trying to influence those around me to see things my way. |
| _____ | 9. I take moderate risks and stick my neck out to get ahead at work. |
| _____ | 10. I prefer to do my own work and let others do theirs. |
| _____ | 11. I disregard rules and regulations that hamper my personal freedom. |
| _____ | 12. I find myself organizing and directing the activities of others. |
| _____ | 13. I try to avoid any added responsibilities on my job. |
| _____ | 14. I express my disagreements with others openly. |
| _____ | 15. I consider myself a "team player" at work. |
| _____ | 16. I strive to gain more control over the events around me at work. |
| _____ | 17. I try to perform better than my co-workers. |
| _____ | 18. I find myself talking to those around me about non-business related matters. |
| _____ | 19. I try my best to work alone on a job. |
| _____ | 20. I strive to be "in command" when I am working in a group. |

Appendix G

Social Desirability Scale

Please circle True (T) or False (F) for each question.

- | | | |
|---|---|--|
| T | F | 1. Before voting I thoroughly investigate the qualifications of all the candidates. |
| T | F | 2. I never hesitate to go out of my way to help someone in trouble. |
| T | F | 3. It is sometimes hard for me to go on with my work if I am not encouraged. |
| T | F | 4. I have never intensely disliked anyone. |
| T | F | 5. On occasion I have had doubts about my ability to succeed in life. |
| T | F | 6. I sometimes feel resentful when I don't get my way. |
| T | F | 7. I am always careful about my manner of dress. |
| T | F | 8. My table manners at home are as good as when I eat out in a restaurant. |
| T | F | 9. If I could get into a move without paying and be sure I was not seen, I would probably do it. |
| T | F | 10. On a few occasions, I have given up doing something because I thought too little of my ability. |
| T | F | 11. I like to gossip at times. |
| T | F | 12. There have been times when I felt like rebelling against people in authority even though I knew they were right. |
| T | F | 13. No matter who I'm talking to, I'm always a good listener. |
| T | F | 14. I can remember "playing sick" to get out of something. |
| T | F | 15. There have been occasions when I took advantage of someone. |
| T | F | 16. I'm always willing to admit when I make a mistake. |
| T | F | 17. I always try to practice what I preach. |
| T | F | 18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people. |
| T | F | 19. I sometimes try to get even, rather than forgive and forget. |
| T | F | 20. When I don't know something, I don't at all mind admitting it. |
| T | F | 21. I am always courteous, even to people who are disagreeable. |
| T | F | 22. At times I have really insisted on having things my own way. |
| T | F | 23. There have been occasions when I felt like smashing things. |
| T | F | 24. I would never think of letting someone else be punished for my wrong-doings. |
| T | F | 25. I never resent being asked to return a favor. |

- | | | |
|---|---|---|
| T | F | 26. I have never been irked when people expressed ideas very different from my own. |
| T | F | 27. I ever make a long trip without checking the safety of my car. |
| T | F | 28. There have been times when I was quite jealous of the good fortune of others. |
| T | F | 29. I have almost never felt the urge to tell someone off. |
| T | F | 30. I am sometimes irritated by people who ask favors of me. |
| T | F | 31. I have never felt that I was punished without cause. |
| T | F | 32. I sometimes think when people have a misfortune they only got what they deserved. |
| T | F | 33. I have never deliberately said something that hurt someone's feelings. |

Appendix H

Life Success Measures Scale

People have different ideas about what it means to be successful. Please rate each of the following ideas on life success by placing the number that best represent its importance to you in the blank space provided for each question.

5	4	3	2	1
Always Important	Very Often Important	Fairly Often Important	Occasionally Important	Never Important

- _____ 1. Getting others to do what I want.
- _____ 2. Having inner peace and contentment.
- _____ 3. Having a happy marriage.
- _____ 4. Having economic security.
- _____ 5. Being committed to my organization.
- _____ 6. Being able to give help, assistance, advice and support to others.
- _____ 7. Having a job that pays more than peers earn.
- _____ 8. Being a good parent.
- _____ 9. Having good job benefits.
- _____ 10. Having a rewarding family life.
- _____ 11. Raising children to be independent adults.
- _____ 12. Having people work for me.
- _____ 13. Being accepted at work.
- _____ 14. Enjoying my non-work activities.
- _____ 15. Making or doing things that are useful to society.
- _____ 16. Having high income and the resulting benefits.
- _____ 17. Having a sense of personal worth.
- _____ 18. Contributing to society.
- _____ 19. Having long-term job security.
- _____ 20. Having children.
- _____ 21. Getting good performance evaluations.
- _____ 22. Having opportunities for personal creativity.
- _____ 23. Being competent.
- _____ 24. Having public recognition.
- _____ 25. Having children who are successful emotionally and professionally.
- _____ 26. Having influence over others.
- _____ 27. Being happy with my private life.
- _____ 28. Earning regular salary increases.
- _____ 29. Having personal satisfaction.

- _____ 30. Improving the well-being of the workforce.
- _____ 31. Having a stable marriage.
- _____ 32. Having the confidence of my boss.
- _____ 33. Having the resources to help others.
- _____ 34. Being in a high status occupation.
- _____ 35. Being able to make a difference in something.
- _____ 36. Having money to buy or do anything.
- _____ 37. Being satisfied with my job.
- _____ 38. Having self-respect.
- _____ 39. Helping others to achieve.
- _____ 40. Having personal happiness.
- _____ 41. Being able to provide quality education to my children.
- _____ 42. Making a contribution to society.

Appendix I

Experimental Debriefing

We are conducting the study in which you just participated to improve our understanding of four psychological factors that may affect performance on a variety of tasks. The questionnaires you completed provided us with measures of these factors which include Need for Achievement, Need for Approval from others, Life Success, and level of depression. With exception of depression, Industrial/Organizational psychologists have attempted to use these measures to assist in making decisions about employee hiring, promotion, and selection.

Clinical psychologists have also measured Need for Achievement and Need for Approval. They usually use identical test but they seem to be measuring much the same thing. Clinical psychologists have also shown that Need for Approval and Need for Achievement are affected by depression. If we are able to show that depression similarly affects scores on the tests used by Industrial/Organizational psychologists, we may be able to conclude that all evaluations of this type should include a measure of depression.

Some participants were assigned to a control group condition which consisted of repeating 60 statements with neutral information. The information in the neutral statements didn't alter your current mood state. However, the experimental group condition consisted of repeating 60 statements with negative information. The negative statements that subjects repeated may have temporarily suppressed their current mood state.

Our hypothesis is that Need for Approval and Need for Achievement scores that may be used for job placement, etc., are temporarily lowered by depression. Taking depression into account

could prevent bias against candidates whose scores are temporarily affected by depression.

In order for our data to be meaningful, we need to run more student participants who do not know what we are studying. Since you understand what we are doing, would you please commit to not talking to other students about this study until it is complete?

Thank you for your participation. Do you have any questions?